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AN INVESTIGATION AND ANALYSIS OF THE HISPANIC STUDENTS' NATIONWIDE SCHOOL DROPOUT RATES AND THE DIFFERENCE BETWEEN THOSE WHO COMPLETE THEIR HIGH SCHOOL DIPLOMA AND THOSE WHO DROPOUT

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ABSTRACT

An Investigation And Analysis Of The Hispanic Students' Nationwide School Dropout Rates And The Difference Between Those Who Complete Their High School Diploma And Those Who Dropout

by

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As the United States embarks on the twenty-first century, anxiety continues about the American educational system. The dropout crisis in the United States and particularly among the Hispanic students is a matter of serious concern for parents, educators, politicians, and the general public. Due to the rapid technological advances, staying in school and graduating is crucial for preparing a skilled, knowledgeable, and flexible work force needed by America to compete in the global economy. Hispanic students are the largest-growing sector of the population and have the highest dropout rate of any major segment of the U.S. population (Hispanic Dropout Project, 1996).

While the nation's high school dropout rates have improved among White and African American students, Hispanic students' dropout rates are still at alarming levels. Hispanic students are dropping out of school at a rate that does not show signs of diminishing—with ultimate perilous costs to society. In 1994, the number of Hispanic
students aged 16-24, who had not completed high school and were not enrolled, was 30 percent – as compared to 8 percent for White students and 13 percent for African American students (Hispanic Dropout Project, 1996).

In order to devise genuine strategies that will reduce the Hispanic students' high dropout rates, educational policy-makers and educational analysts must first abandon the prevalent popular conceptions that place blame on the individual, indicting the student or family for laziness, lack of willingness to be assimilated into American culture, and reluctance to learn English. A common and pernicious belief condemns Hispanic students for their alienation from school without taking into account the power of contextual factors that influence their school experiences.

This study offers a broad investigation into the factors that may be associated with Hispanic students' high dropout rates. It considers not only the demographic factors but also investigates the roles of family background, early school experiences, and social influences in the high Hispanic students' dropout rates.

The analysis was based on demographic factors, academic ability, family background, school experiences, and social influence factors taken from a national sample of high school sophomores twelve years after high school.

In order to develop a predictable model, Academic Ability, Family Socioeconomic Status, Sex, Employment Status, Sibling Academic Status, Repeated a Grade, Citizenship Status/English Proficiency, Pregnancy/Fatherhood, Alcohol and Drug Use, Friends' Interest in School, Cut Classes, and High School Location were used as the independent variables while Dropout was used as the dependent variable.
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CHAPTER 1

INTRODUCTION

Today high school dropout rates are often quoted as an indication of the success or failure of American schools. As the American economy demands a more educated and highly trained work force, it has become increasingly important for American youth to continue their education through high school and beyond. Much of the interest in measuring dropouts stems primarily from the following:

First, there is concern about how well prepared our young adults are for entry into the work force. Without a high school diploma, and increasingly, a college degree or skilled training, chances for obtaining high quality, well-paid jobs are limited. The bulk of the interest in measuring high school dropout rates stems from the concern over how well prepared our young adults are for entry into the work force. As the emphasis on skilled labor and technology increases in the workplace, a high school education serves more and more as a minimum requirement for entry into the labor force (Markey, 1988). This, then, leads to interest in a measure of the number of young adults who have completed a high school program (Markey, 1988).

Second, research studies have highlighted that dropouts have a profound impact on our society as nearly half the heads of household on welfare did not graduate from high school and more than half of the U.S. prison population is composed of high school dropouts. In essence, students who do not receive adequate education will be more
vulnerable to poverty, homelessness, crime, substance abuse, and other negative factors (IDRA, 1986).

George Bush, in his First State of the Union Address, January 1990, set some goals to strengthen American education. One of the goals was to reduce the national high school dropout rate to 10 percent by the year 2000. According to president Bush at the time, the rate was 25 percent. This high rate, it is said, saddles the United States with an undereducated work force that, in turn, retards economic and social development. Dropouts also cost the nation billions of dollars in lost tax revenues and in welfare, unemployment, and crime prevention programs (Hahn and Danzberger, 1987).

The latest figures from the US government have been recently released, covering the academic year 1994-95 (McMillan, Kaufman, and Klein, 1997). Defining the dropout rate as the proportion of young adults (ages 16 to 24) who are not enrolled in a high school program and who have not completed high school, the Hispanic students recorded the highest dropout rates in the nation: 30 percent of Hispanic young adults were classified as dropouts, compared to 8.6% for non-Hispanic whites and 12.1% for non-Hispanic blacks.

According to the Hispanic Dropout Project (HDP, 1996), a student who drops out of high school is more likely to be unemployed, more likely to earn less when employed, and more likely to raise a family in poverty therefore putting the next generation at risk of dropping out, and repeating this cycle (U.S. Department of Education, 1998a). High dropout rates lead to increased unemployment, increased demands on social services, and a less skilled work force (Rumberger, 1987). The employment possibilities for a high school dropout are greatly restricted (U.S. Department of Education, 1998a, p. 6). For
example, dropouts in 1982 were twice as likely to be unemployed (42%) compared to 1982 high school graduates (23%) (Rumberger, 1987). The effects on an individual's lifetime earnings are even more dramatic: for Hispanic students, the projected loss in lifetime earnings for dropouts is $47.9 billion for the class of 1998 (U.S. Department of Education, 1998a).

But education should not be seen strictly in its relation to the economy; the capability of education to advance the social well-being of the United States and promote democratic values are also essential. Social peace in the United States is predicated on the possibility that all citizens, regardless of their economic and social status, can improve their lives. The dropout problem also threatens the future of American political institutions. The demands of democratic governance require an educated and well-informed citizenry to make knowledgeable decisions about the increasingly complex social and political problems faced by contemporary society.

This study offers a broad investigation into the factors that may be associated with the high Hispanic students' dropout rate. It considers not only the demographic factors but also investigates the roles of family background, school experiences, and social influences in the Hispanic students' dropout.

In essence, the purpose of the study is to offer a broad investigation into the factors that may be associated with Hispanic student's high dropout rates. This study examined the roles of the demographic factors (such as sex and SES) and contextual factors (such as ethnicity, family background, school experiences, and social influences) in the high Hispanic students dropout rates.
Most of the past studies on student dropout rates centered primarily on demographic factors such as sex, ethnicity, and family socioeconomic status. These factors may not be the key causes of students dropout but an over rationalization or simplification of a more complex problem. This study considers not only the demographic factors but also investigates the roles of family background, school experiences, and social influences in the high Hispanic students’ dropout rate. The data for this study was taken from a national sample of high school sophomores 10 years after high school.

This study is significant to American high schools, concerned educators, educational analysts, educational policy-makers, and the general public for the following reasons:

- Provided a comprehensive study of Hispanic students’ dropout problem
- Highlighted the social and individual costs of dropping out
- Highlighted the importance of dropout intervention and prevention programs
- Highlighted the impacts of student tracking

There is little systematic, longitudinal, large-scale research aimed specifically at the high Hispanic students’ dropout rates even though studies have shown that Hispanics are the fastest growing ethnic segment in America. In 1996, the total school enrollment in K-12 was 51.5 million and this is projected to increase to over 54.3 million by 2004 (Gerald and Hussar, 1997). The number of Hispanic children aged 5-17 years is expected to grow by a third in the next decade and to more than double by 2025, whereas the number of African-American children aged 5-17 years is expected to grow by a quarter

Consequently, the projected change in the racial/ethnic composition of school-aged children implies a substantial increase in the size of the educationally disadvantaged population. According to Natriello, McDill, and Pallas (1990), report that, "Failure to educate the educationally disadvantaged adequately may have catastrophic consequences for the social and economic well-being of this country."

However, the decision to dropout of school is a complex and diverse affair. It is a process, not an event because it is uncommon for a student to make an overnight decision to leave school. Students from minority backgrounds particularly the Hispanic students face both structural and individual obstacles during the school year that place them at risk of educational failure (Berends and Koretz, 1996; Natriello, McDill, and Pallas, 1990; and Wilson, 1991).

To adequately understand the dynamic process that determines whether or not a student stays in school or drops out requires consideration of the student and the demands in the student's life, the school experiences, the local policies and practices, the state and federal policies that shape and reflect the social and educational views of the nation, and much more. Most of the past research studies on student dropout centered primarily on demographic factors such as sex, ethnicity, and family socioeconomic status. For instance, prior research has shown that poverty tends to be highly correlated with lower student achievement (Berends and Koretz, 1996; Grissmer, Kirby, Berends, and Williamson, 1994; Hill and O'Neill, 1994). These factors may not be the key causes of students dropout but an over rationalization or simplification of a more complex problem.
When calculating student dropout rates, there are generally three different ways used in computing student dropout rates namely: event, status, and cohort rates (NCES, 1980). Each one provides unique information about the student dropout population.

- The event dropout rate provides a measure of recent dropout experiences. Event rates are important because they reveal the proportion of students who leave high school each year without completing a high school program.

- The status dropout rate is a cumulative rate. It is much higher than the event rate because it includes all dropouts, regardless of when they last attended school. Status rates are important because they reveal the extent of the dropout problem in the population. This rate suggests the magnitude of the challenge for further training and education that will be needed if these dropouts are to participate fully in the economy and life of the nation.

- The cohort dropout rate measures what happens to a single group, or cohort, of students over a period of time. This rate is based on repeated measures of a group of students with shared experiences. Cohort rates are important because they reveal how many students starting in a specific grade drop out over time. In addition, cohort rates from longitudinal studies provide more background and contextual data on the students who drop out. This Hispanic students' dropout study belongs in this category.

Providing a summary of the reasons and factors that contribute to being at-risk of leaving school early, aside from the more concrete demographic and background factors by past research, is problematic at best. A review of the literature indicates that the categories can be as few as 4 - school-related, work-related, family-related, and other
(Mann, 1986) - or as many as 24 (California State Department of Education, 1986). What most researchers agree on, however, is that there are multiple reasons which lead to a student's being at-risk of making a decision to drop out of school. Those reasons may include factors related to current family obligations, family conditions, attitudes about school, and the lure of paid work outside the school (McDill, Natriello, & Pallas, 1986).

Those non-school factors which appear time and again in the literature fall into three major categories: 1) economic considerations; 2) pregnancy and marriage; and 3) activities outside of the school which are unrelated to the school.

It has been argued that lack of academic success "is the best predictor of dropping out" (Wagenaar, 1987). Consistent with that view, a history of school failure beginning in grade school and continuing in high school too often induces students to leave school before graduating (DeRidder, 1988; Fine, 1986; McDill et al., 1986; Rumberger, 1987; 1983; TEA, 1989). A structural pattern that is common in schools and has been found to affect student success and failure is academic tracking.

Problem Statement

Are there differences in demographics, family background, school experiences, and social influences between the Hispanic students who complete high school diploma and those who drop out.

Research Questions

The study addressed itself to the following specific research questions:

1. Are there differences in SES between the Hispanic students who complete high school diploma and those who dropout?
2. Are there differences in Test Scores between the Hispanic students who complete high school diploma and those who dropout?

3. Are there differences in Sex between the Hispanic students who complete high school diploma and those who dropout?

4. Are there differences in Employment Status (ES) between the Hispanic students who complete high school diploma and those who dropout?

5. Are there differences in Sibling Academic Status (SAS) between the Hispanic students who complete high school diploma and those who dropout?

6. Are there differences in Repeating a Grade (Held Back /Retained) between the Hispanic students who complete high school diploma and those who dropout?

7. Are there differences in Citizenship Status/English Proficiency between the Hispanic students who complete high school diploma and those who dropout?

8. Are there differences in Pregnancy/Fatherhood between the Hispanic students who complete high school diploma and those who dropout?

9. Are there differences in Alcohol and Drug Use between the Hispanic students who complete high school diploma and those who dropout?

10. Are there differences in Friends Interest in School between the Hispanic students who complete high school diploma and those who dropout?

11. Are there differences in Truancy between the Hispanic students who complete high school diploma and those who dropout?

12. Are there differences in Location of School (Urbanicity) between the Hispanic students who complete high school diploma and those who dropout?
Purpose of the Study

The purpose of the study is to examine the roles of the demographic factors (such as sex and SES) and contextual factors (such as family background, school experiences, and social influences) in the high Hispanic students dropout rates.

Most of the past studies on student dropout rates centered primarily on demographic factors such as sex, ethnicity, and family socioeconomic status. These factors may not be the key causes of students dropout but an over rationalization or simplification of a more complex problem. This study considers not only the demographic factors but also investigates the roles of family background, school experiences, and social influences in the high Hispanic students' dropout rate.

Conceptual Rationale

There is little systematic, longitudinal, large-scale research aimed specifically at the high Hispanic students’ dropout rates even though studies have shown that Hispanics are the fastest growing ethnic segment in America. In 1996, the total school enrollment in K-12 was 51.5 million and this is projected to increase to over 54.3 million by 2004 (Gerald and Hussar, 1997). The number of Hispanic children aged 5-17 years is expected to grow by a third in the next decade and to more than double by 2025, whereas the number of African-American children aged 5-17 years is expected to grow by a quarter by 2025 (U.S. Bureau of the Census, 1997; National Research Council, 1997). Consequently, the projected change in the racial/ethnic composition of school-aged children implies a substantial increase in the size of the educationally disadvantaged population. According to Natriello, McDill, and Pallas (1990), report that, “Failure to
educate the educationally disadvantaged adequately may have catastrophic consequences for the social and economic well-being of this country."

However, the decision to dropout of school is a complex and diverse affair. It is a process, not an event because it is uncommon for a student to make an overnight decision to leave school. Students from minority backgrounds particularly the Hispanic students face both structural and individual obstacles during the school year that place them at risk of educational failure (Berends and Koretz, 1996; Natriello, McDill, and Pallas, 1990; and Wilson, 1991).

To adequately understand the dynamic process that determines whether or not a student stays in school or drops out requires consideration of the student and the demands in the student's life, the school experiences, the local policies and practices, the state and federal policies that shape and reflect the social and educational views of the nation, and much more. Most of the past research studies on student dropout centered primarily on demographic factors such as sex, ethnicity, and family socioeconomic status. For instance, prior research has shown that poverty tends to be highly correlated with high student dropout (Berends and Koretz, 1996; Grissmer, Kirby, Berends, and Williamson, 1994; Hill and O'Neill, 1994). These factors may not be the key causes of students dropout but an over rationalization or simplification of a more complex problem.

This study offers a broad investigation into the factors that may be associated with Hispanic student dropouts. It considers not only the demographic factors but also investigates the roles of family background, school experiences, and social influences in the Hispanic students' dropout rates.
Significance of the Study

Over the past decade, school reform has occurred largely at the state level and has been concerned with changes in school practices (Mann, 1986). And recently, attention has been turned to the development of national achievement standards and to state policies designed to alter the academic motivation of the students themselves. The federal government, on the other hand, has for decades been making some efforts toward understanding student dropout problem and its subsequent prevention. In the U.S. Department of Education, the National Center for Education Statistics (NCES) publishes an annual report on the status of dropouts in the nation, and data from NCES longitudinal surveys provide the foundation for descriptive and analytic research on the topic. Nonetheless, the high dropout rates have continued to plague the American high schools. This study is significant to American high schools, concerned educators, educational analysts, educational policy-makers, and the general public for the following reasons:

- Provided a comprehensive study of Hispanic students’ dropout problem
- Highlighted the social and individual costs of dropping out
- Highlighted the importance of dropout intervention and prevention programs
- Highlighted the importance of social promotion

Provided a Comprehensive Study of Hispanic Students’ Dropout Problem

Several research studies have shown that the dropout rates of traditionally disadvantaged groups, especially Hispanics and American Indians, remain far higher than the rates of the other ethnic groups. Equally troubling is that, while the overall students’ dropout rates in the United States in recent years have declined, Hispanic dropout rates have not been falling significantly. These high rates are particularly disturbing in light of
the growing proportion of Hispanics in the population. For instance, according to a recent study on Hispanic students, titled "No More Excuses," that was established at the request of Sen. Jeff Bingaman (Democrat, New Mexico) and released on February 2, 1998 by Vice President Al Gore:

- Nearly 30% U.S. Hispanics between 16 and 24 who ever enrolled in a U.S. school left without either a high school diploma or an alternative certificate, such as a GED.

- If all Hispanics are considered -- including those who never enrolled in school -- the proportion without a high school diploma or its equivalent is 30 percent.

- The Hispanic dropout rate has remained between 30 percent and 35 percent over the past 25 years, and is 2.5 times the rate for blacks and 3.5 times the rate for white non-Hispanics.

- The report blames crumbling and overcrowded schools, lack of teacher training, lowered academic expectations and school bureaucracies, which discourage parental involvement.

However, while most of these research studies conducted on the Hispanic students dropout rates have been narrow in scope, this study will investigate and analyze this problem in a broader perspective, so as to shape a better understanding of this problem, guide the development and implementation of a more successful dropout intervention and prevention programs.
Highlighted The Social and Individual Costs of Dropping Out

Research studies have shown that withdrawal from school has adverse social and individual implications and, consequently, should not be overlooked. The most apparent of the two is, the societal implications, which researchers outlined to include greater unemployment, added social service costs, as well as increases in crime. However, the less publicized or less understood factor is the individual costs associated with leaving school without graduating.

♦ Costs to Individuals

The requirement of today’s American work force has changed dramatically as the emphasis on skilled labor and technologies have increased in the work place. Consequently, young adults who leave school before graduating and acquiring needed skills will suffer greater penalties both in unemployment and underemployment rates than their counterparts who do complete high school (Bickel & Papagiannis, 1988).

Besides the higher unemployment and underemployment rates that relegate most school dropouts to lower social status and lower standards of living, associated with residing at the bottom of the social economic ladder, researcher studies points out that leaving school early without graduating creates a host of problems and negative effects (Catterall, 1987).

Although the connection between dropping out and criminal behavior has not yet been unequivocally established, the high representation of dropouts among those in prison suggests that dropouts are individuals who may have seen too few options available to them and so have found themselves in circumstances which promote criminal behavior (IDRA, 1989).
Rumberger (1987) reports that dropouts often suffer from more health and dental problems, increases in total mortality and suicides, and are admitted in greater numbers to mental hospitals than those in the general population. For too many dropouts, school is seen as a place where they have encountered failure after failure (for a variety of reasons) resulting in lower self-esteem (Bickel & Papagiannis, 1988; Catterall, 1987).

- Costs to Society

The society in general pays a price for student dropouts. As a consequence of the high dropout rates and subsequent unemployment or underemployment, the decreased earning power and loss of tax revenue from those who leave early is substantial. Its impact on social welfare services is equally tremendous. The state of Texas is probably the only state in America that has made a genuine effort as well as conducted a fairly comprehensive study over a decade ago to assess the dropout costs to its state (Markey, 1988).

In a fairly comprehensive study commissioned by the state of Texas over a decade ago and conducted by the Intercultural Development Research Association (IDRA), that analyzed the cost of students leaving school early in Texas, the Intercultural Development Research Association (IDRA) projected that the total earnings and tax losses to the state of Texas due to projected attrition rates among 1982-1983 ninth graders dropouts alone was nearly $16.9 billion (IDRA, 1986). They estimated that "45,344 males and 40,656 females ninth graders would drop out of school, that their lifetime earnings (adjusted for differences between expected income for graduates and those for dropouts) would be $241,630 for males and $146,072 for females, and that this would result in a loss of earnings of nearly $17 billion (including $5.068 billion in lost tax

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revenues)" (IDRA, 1986, p. 29). If that is the case, imagine the cost when the tenth, eleventh, and twelfth graders dropouts are included. Consequently, the issue of school dropout becomes significant because the society cannot afford to undermine it.

Highlighted The Importance of Dropout Intervention and Prevention Programs

Research studies have highlighted that dropouts have a profound impact on society as nearly one-half of the heads of household on welfare did not graduate from high school and half of the U.S. prison population constitute high school dropouts. In the IDRA study the costs to the state of Texas for social welfare services, unemployment, crime and incarceration, and educating those dropouts who had left school early were also calculated. The burden to the state of Texas for only two social welfare programs alone (Aid to Families with Dependent Children and Food Stamps) was estimated at $253.7 million a year. The cost associated with increased unemployment (job placement services, unemployment compensation) was estimated at $17.6 million annually. With regard to costs associated with crime and incarceration, IDRA estimated that the state of Texas increased expenditures approximately $367.77 million. Finally, the cost of training and adult education was set at $12.9 million per annum. The total possible savings associated with keeping students in school was calculated to be approximately $652 million per year in Texas alone!

To demonstrate the difference between the cost of keeping children in school and the costs associated with their dropout, IDRA figured that in order to educate those potential dropouts and provide programs which would prevent them from doing so, it would cost the state of Texas nearly $2 billion per cadre (one class as it moves through grade levels). When compared to just the lost wages and tax revenues of nearly $17
billion, the result is an almost 9 to 1 ratio. That is, for every dollar spent on education and the prevention of dropouts, the return would be nine dollars.

These fairly comprehensive figures from IDRA study represent a cost-benefit analysis for only one state. If those calculations can be generalized to the rest of the country, (Texas dropouts represent nearly 10% of the national dropout figure) then the cost to the nation (in terms of the social services mentioned above) would exceed $6.5 billion dollars a year. The loss of earnings and tax revenues over the lifetime of a single cadre would be over $170 billion. Given the findings of the study, society can not afford to take the dropout problem lightly.

Highlighted the Impacts of Student Tracking:

Tracking is the most commonly used term for ability grouping. Traditionally, schools have responded to student diversity and poor academic performance with approaches such as ability grouping, grade retention, special education, and pull-out programs -- in which students are removed from their regular classrooms and offered remedial instruction in particular subjects (Letgers, McDill, & McPartland, 1993). As harmless as it seems, research has dramatically demonstrated that, this practice has done more harm than good. The tracks covered distinctly different curricula. This study calls the attention of educators and the educational policy-makers to the consequences of student tracking. It also highlights how they, the educational policy-maker, can set a policy context for high expectations and success, how important the investment in school dropout prevention and intervention program are in order to reduce school failure, as well as, how these strategies can be sustained through ongoing support for school improvement.
Delimitations of the Study

The research population for this study was drawn from the High School and Beyond (HS&B) longitudinal study dataset of the 1980 high school senior and sophomore student cohort. The sophomore cohort dataset, which span 1980 through 1992, was the only data examined in this study. The 1980 Sophomore Cohort Dataset is taken from a highly stratified national sample of this group of students, ten years after high school. The HS&B data were not only highly stratified, but also involved over 1,100 secondary schools that were randomly selected to participate in the study. From the 1,100 secondary schools, 36 seniors and 36 sophomores were selected in each school. The base year of this survey, which was conducted early in 1980, collected data from over 28,000 seniors and 30,000 sophomores. However, the senior files were discarded for this study because they were followed for only six-years, while the sophomores were followed for 12-years. Only those sophomores whose ethnicity was identified as Hispanic were included in the research cohort.

Definition of Terms

The following are the meanings of the independent, and dependent variables as defined by the National Center for Educational Statistics and applied in this study:

1) **Cohort** — refers to a longitudinal study that follow the experiences that a group or class of students (1980 sophomores) share as they progress through school, colleges, and workforce over time.

2) **Dropout** — refers to a student in the cohort who did not attain a high school diploma or its equivalent 10 years after the student should have graduated.
3) **Socioeconomic status (SES):** -- refers to the students' family social and economic background, which was built using parental education level, parental occupation, family income, and household items.

4) **Academic Ability:** -- refers to the students' high school test score quartile.

5) **Employment Status:** -- refers to whether the student worked more than 20 hours per week while in high school.

6) **Sibling Academic Status:** -- refers to whether or not the dropout students' sibling dropped out of school too.

7) **Retained:** -- refers to whether or not the drop out student was ever held back or repeated a grade.

8) **Citizenship Status/English Proficiency:** -- refers to whether or not the drop out student was born in the United States or an immigrant.

9) **Pregnancy/Fatherhood:** -- refers to whether or not the drop out student was a teen parent while in high school.

10) **Alcohol and Drug Use:** -- refers to whether or not the drop out student abused drug or alcohol while in high school.

11) **Friends:** -- refers to whether or not the drop out student's best friend is interested in school.

12) **Truancy:** -- refers to whether or not the drop out student cut classes or was absent very often.

13) **Urbanicity:** -- refers to the location (urban, suburban, or rural) of the high school that drop out student attended.
Conclusion

At the present, no researcher has performed a comprehensive study to identify
different factors between Hispanic graduates and Hispanic dropouts. The study validated
past studies done on Hispanic students' dropout rates that used only demographic
variables – sex, ethnicity, and SES. It also examined the roles of the contextual factors
such as: family background, school experiences, and social influences in Hispanic
students' dropout as well as investigated the differences between the Hispanic students
who completed their high school diploma and those who dropped out.

In order to develop a predictable model Family Socioeconomic Status (SES),
Academic Ability (Test Score), Sex, Ethnicity, Employment Status (ES), Sibling
Academic Status (SAS), Repeated a Grade (Retained), Citizenship Status (CS)/English
Proficiency, Pregnancy/Fatherhood (PF), Alcohol and Drug Use (ADU), Friends Interest
in School (Friends), Cut Classes (Truancy), and High School Location (Urbanicity) are
used as the independent variable while Dropout was used as the dependent variable.
CHAPTER 2

REVIEW OF RELATED LITERATURE

Dropping out is a complex social problem for which there is no simple solution. Focusing attention on fixing one part of the problem calls attention to the need for solutions to many other parts as well. Thus, many educators and others concerned with the dropout problem are advocating policies involving a broad range of institutions and agencies (e.g., Hargroves 1987).

The school dropout rate for Hispanic students has remained a consistent problem over the past 40 years and, as recently as 1993, about 30 percent of the United States' Hispanic population ages 16 to 24 had dropped out of school. This is in comparison to an overall rate of 11 percent, an 8 percent rate for white non-Hispanics, and a 13 percent rate for African-Americans. This is causing increasing concern among many educators as the Hispanic population grows dramatically, and it will be a disaster for a large percentage of the labor force to lack a high school education. According to Dr. Walter Secada, director of the Hispanic Dropout Project (HDP), "An undereducated and under-skilled Hispanic workforce is harmful not only to Hispanics who drop out, but to the American economy and larger non-Hispanic population as well." (HDP, 1996)

In order to prepare American students for today's high tech jobs and subsequently the types of jobs that will be available in the future, educators, policy-makers, parents, and educational analysts need to work together to ensure that all students stay in school
and acquire the academic skills necessary to compete (National Education Goals Panel, The National Education Goals Report: Building a Nation of Learners, Washington, DC, 1996). As the Hispanic population grows, the reduction of the Hispanic students' dropout rates, the successful transition of Hispanic youth from school to work, and their active engagement in American society become more important for the Nation.

Out of a total 9.9 million young adults aged 15-24 enrolled in high school in October 1996, some 454,000 had quit school by October 1997, without successfully completing a high school program, according to a new government report to Congress (NCES, 1997). Notwithstanding the short-term downtrend in dropout rates, the high school completion rate has shown only a slight change over the past decade, moving up to 85.9 percent in 1997 from 85.5 percent in 1987 (NCES, 1997). In 1997, just over three-quarters (76.7 percent) of the 18- to 24-year-olds not still in high school were reported as being high school graduates. Another 9.1 percent completed an alternative route, such as the GED (NCES, 1997).

In their report, Dropout Rates in the United States: 1997, released in 1997 by the U.S. Department of Education's National Center for Education Statistics, Phillip Kaufman, Steve Klein, and Mary Frase warn that, "The economic consequences of leaving high school without a diploma are severe." The report is the tenth in the series and presents data for 1997 on high school dropout rates, high school completion rates, and graduation rates.

According to Kaufman, Klein, and Frase (NCES, 1997), compared to high school graduates, dropouts are:

- More likely to be unemployed;
• More likely to earn less money;
• More likely to receive public assistance; and
• If female, more likely to have children at younger ages and more likely to be a single parent.

The authors add that, "The individual stresses and frustrations associated with dropping out have social implications as well because dropouts comprise a disproportionate percentage of the nation's prison and death row inmates."

The Hispanic Dropout Project (HDP, 1996) has published a Data Book, which shows the scope of the Hispanic dropout problem, its causes, and its consequences. According to the Data Book, social and economic costs are escalating for many reasons:

• The Hispanic population is rapidly growing, in both absolute numbers and as a proportion of US students
• Fewer dropouts will find employment in future workplaces
• Upgraded workforce skills are critical for an individual's and the nation's successes in the global economy
• People need increasingly more advanced knowledge and skills to participate in this society, to vote intelligently, and to make intelligent consumer decisions
• Labor force productivity and income must expand to help meet the needs of senior citizens as they continue to make up a larger segment of our population
• Children of the future will be strongly affected by their parents' income and education levels.
The increase in the Hispanic population in the United States, and the resulting rise in the enrollment of Hispanic students, has contributed to an 11 percentage point increase in minority enrollment in public elementary and secondary schools between 1976 and 1995. In 1976, Hispanic students made up 6 percent of the student population at public elementary and secondary schools. By 1995, the proportion of Hispanic students rose 8 percentage points, reaching 14 percent, the largest increase of any minority group.

Percentage Distribution of Enrollment in Public School Schools by Ethnicity 1976-95

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Racial and ethnic diversity in the United States has grown dramatically in recent years, and the growth of the Hispanic population has been a major contributor to this diversity. The Hispanic population has increased more rapidly than any other racial or ethnic group, growing from 9 percent of the child population in the United States in 1980 to 14 percent in 1996. Predictions indicate that by the year 2020, more than 20 percent of the children in the United States will be Hispanic.

In general, the educational achievement and attainment of Hispanics has been lower than that of whites. Since Hispanics account for a growing percentage of the general U.S. and public school population, it has become increasingly important to understand the educational experiences and transitions to the labor force of Hispanics. Understanding the differences in educational experiences between Hispanics and whites, and how these differences have changed over time, provides an overview of the educational progress of Hispanics in the United States.

The HDP (1996) notes that Hispanics enter school later, leave school earlier, and receive proportionally fewer high school diplomas and college degrees than other Americans. In fact, Hispanics are still among the most undereducated segment of the US population.

**Historical Perspective**

Hampel (1986) reported that "[i]n 1900, 11% of the fourteen-to-seventeen-year-olds were in school; by 1940, the figure was 73%" (p.14). Boyer (1983) put this in a better perspective when he wrote, "[b]y 1930 a quiet, yet profound social revolution was occurring. Total public high school enrollment had swelled to 4.4 million...[b]y 1950, it
had increased to 5.7 million" (p. 52). Subsequently, high school enrollment peaked in the mid-1970's at over 14 million students. Not only has the school population risen at a staggering rate, but the percentage of high school age children attending school has also risen precipitously (from 11% of less than half a million to over 75% of approximately 19 million).

For the dropout problem, changes over the last century have been equally profound and dramatic. At the turn of the century only 4% of students entering school in the first grade finished high school 12 years later. By 1950, American high schools were able to increase that to 50%; by 1975 the figure was approximately 67%, and in 1980 it had risen to 75% (Bickel & Papagiannis, 1988; Larsen & Shertzer, 1987; Stroup & Robins, 1972). Since 1980 the high school completion rate has remained somewhere in the neighborhood of 70% to 75% (Mann, 1986; Strother, 1986; Wagenaar, 1987). Although these figures are not always entirely reliable, they do at least indicate a likelihood that dropout rates have stabilized to some degree over the last decade.

Despite the apparent reduction of the overall dropout rate, the consequences of dropping out arguably have had a greater impact on those who do not finish high school today than on those who dropped out in times past. Papagiannis, Bickel, & Fuller (1983) wrote that "dropouts today face a far different social and economic environment than they did 50 or even 25 years ago" (p. 369). They conclude that previously those who dropped out were more likely to find work as unskilled labor or, if specialized training were necessary, work which would provide that training on the job. Dropouts in the past were less of a "problem" for the society because, despite their numbers, they were more readily
assimilated into the workplace. As modernization occurred, the unskilled dropout ceased to be the backbone of the work force (Greer, 1972).

Therefore, the current consequences of dropping out are much greater for both the society and the individual than they were prior to the 1970s. Being at risk of leaving school has therefore become a significant concern to researchers, educators, and politicians. It is this concern which drives the present research.

Types of Dropout Rates

When calculating student dropout rates, there are generally three different ways researchers used in computing student dropout rates namely: event, status, and cohort rates. Each one provides unique information about the student dropout population.

- The event dropout rate provides a measure of recent dropout experiences. Event rates are important because they reveal the proportion of students who leave high school each year without completing a high school program.

- The status dropout rate is a cumulative rate. It is much higher than the event rate because it includes all dropouts, regardless of when they last attended school. Status rates are important because they reveal the extent of the dropout problem in the population. This rate suggests the magnitude of the challenge for further training and education that will be needed if these dropouts are to participate fully in the economy and life of the nation.

- The cohort dropout rate measures what happens to a single group, or cohort, of students over a period of time. This rate is based on repeated measures of a group of students with shared experiences. Cohort rates are important because they
reveal how many students starting in a specific grade drop out over time. In addition, cohort rates from longitudinal studies provide more background and contextual data on the students who drop out. This Hispanic students dropout study belongs in this category.

High School Dropout Trends

NCES publishes an annual report that allows readers to compare dropout rates over time (McMillen et al., 1994). Nationwide, dropout rates have declined during the last decade:

- The status dropout rate for 16- to 24-year-olds declined from 14.6 percent in 1972 to 11.0 percent in 1992 and 1993;
- The event dropout rate for ages 15 through 24 in grades 10 through 12 has fallen from 6.1 percent in 1972 to 4.5 percent in 1993; and
- The cohort rate [3] for students who were sophomores in 1980 and dropped out between grades 10 and 12 was 11.4 percent, while the cohort rate for a comparable group of 1990 sophomores was 6.2 percent.

Even though the rates are declining, they still represent a large number of people. In 1993, approximately 381,000 students in grades 10 through 12 dropped out of school, and approximately 3.4 million persons in the United States ages 16 through 24 were high school dropouts.

Dropout rates are about the same for males and females, but the rates are not the same for students from different ethnic groups or different income levels. In general,
rates are higher for minority students and students from disadvantaged backgrounds. The 1993 status dropout rate was:

- 7.9 percent for white students, compared to 13.6 percent for black students and 27.5 percent for Hispanic students; and
- 2.7 percent for students with a high family income level, compared to 23.9 percent for students with a low family income level.

Rates for American Indians and Alaska Natives are quite high, while those for Asian-American students are quite low. The dropout rate is greater in cities than in other localities, and is highest in the West and South (OERI 1993).

High School Completion Trends

Despite the talk about a dropout crisis, more American students are getting a high school diploma or its equivalent now than at any other time in the nation’s history. Only within the past half-century has there been an emphasis on graduating from high school. In 1910, for example, only 13.5 percent of the population age 25 and over had completed at least four years of high school. By 1940 this had climbed to 24.5 percent, and by 1970 to 55.2 percent. Among those between ages 25 and 29, these rates rose at an even faster pace. In 1940 the percentage of "young adults" with at least four years of high school was 38 percent; by 1988 this had risen to 86 percent (Chester E. Finn, Jr., 1987). The high school completion rates for black students between ages 25 and 29 has risen from 11.6 in 1940 to 81 percent in 1988 (U.S. Department of Commerce, 1990).

Graduation rates for both whites and minorities have been rising steadily over the past two decades, while disparities between them have been narrowing. In 1968 white
graduation rates by age 24 were nearly 86 percent higher than black graduation rates, with the national black dropout rate at approximately 28 percent and the white dropout rate at approximately 15 percent. In the twenty years after 1968, the white dropout rate fell to 12.6 percent while the black dropout rate fell to slightly below 15 percent. When parental education levels and other background factors are equated, black dropout rates are the same as those for whites and in some cases are even lower. (Finn, op. cit., p.14.)

By contrast, Hispanic dropout rates have been climbing. The National Center for Education Statistics reports that the Hispanic dropout rate is 35.7 percent. There is a reason for this. Not only is the Hispanic population growing faster than any other ethnic group in the U.S., over a third of this population are immigrants, with half of them arriving in the past decade (Ben Wattenberg, 1989).

When statistics cover all Hispanics in the U.S., the dropout rate seems alarmingly high. But when census data are used that account for length of residence and time of arrival, native-born Hispanics are found to be faring almost as well as white Americans in median education attainment. In the 1980 census, the median education attainment for U.S.-born Hispanic-Americans was 11.1 years; it was 12 years for whites. For foreign-born Hispanic Americans the median attainment was 6.1 years. When the median education attainment for native-born and foreign-born Hispanic-Americans was measured without differentiating between them, the average was 9.1 years.

This failure to distinguish between native and foreign-born Hispanics is what makes it seem that all Hispanics are faring poorly. For Hispanics that do not speak English, the dropout rate is between three and four times as high as Hispanics who do. The recent, rapid increase in the number of foreign-born, Hispanic immigrants with little
or no English skills may help explain the current high dropout rates among this ethnic
group (Linda Chavez, 1980). Data are from the 1980 decennial census. The Census
Bureau's Population Characteristics Series of the Current Population Survey (CPS) does
not make distinctions among Hispanic subgroups by nativity or length of residence in the
U.S. To provide more accurate data, the Census Bureau should report this information in
the CPS as it does in the decennial census.

Other immigrant groups have experienced similar patterns of school attendance.
Example: during the 1930s educators struggled to understand the high rate of attrition
among the Italian population. Today, no one talks about an "Italian Dropout Crisis."

Some educators push bilingual education as a strategy to reduce the Hispanic
dropout rate, assuming that difficulty with English drives many Hispanics out of school.
Students in a typical bilingual education setting usually are taught in Spanish and have
little exposure to English. Yet evidence suggests that students who do not speak English
or have little exposure to English are at a much greater risk of dropping out. (Ibid. at 3,
pp. 24-33.) Students who are expected to learn and use English quickly score higher on
achievement tests and have a higher rate of high school graduation that students who are
taught in bilingual settings (Eileen M. Gardner, 1987).

Calculating the Dropout Rate

For years, education analysts have put the national dropout rate at between 24
percent and 29 percent. In some urban areas they estimate the dropout rate to be double
that. These estimates have been based on the percentage of ninth grade students who
graduate within four years. Other estimates, such as those published by the U.S.
Department of Education's National Center for Education Statistics put the national dropout rate at between 12 percent and 18 percent. Accounting for the wide differential between these two estimates are the criteria used to define a dropout and the methods used to measure them.

Typically, figures cited to establish an alarmingly high dropout rate are taken from the Department of Education's annual State Education Performance Chart, commonly known as the "Secretary's Wall Chart." This is compiled from graduation estimates reported by education agencies of all 50 states and the District of Columbia. In 1987 the average national graduation rate of 18- to 19-year-olds was 71.1 percent. Simple subtraction then yields a national dropout rate of 28.9 percent of 18- to 19-year-olds (Mary Frase, 1988). In truth, this is not the dropout rate at all; it merely is the rate of those not graduating "on time." It ignores those 18- and 19-year-olds who graduate early, those who are still enrolled in high school but have not graduated, and those in high school equivalency programs. And, of course, this dropout rate completely ignores those who subsequently complete their education. To make matters more confusing, state education departments do not use uniform criteria to count graduates.

A more appropriate definition of the dropout rate is that used by the Census Bureau's Current Population Survey. It defines the rate as the percentage of 16- to 24-year-olds who have not graduated and are not enrolled in school or an equivalency program. This more accurately reveals the extent of failure to complete a high school education because it accounts for those who, for a variety of reasons, take longer to complete their education. Using the Census Bureau's definition, the National Center for Education Statistics estimates the dropout rate at 12.9 percent (Mary Frase, 1988).
The National Center's statistics suggest that most "dropouts" quickly discover that their opportunities in the job market are severely restricted by their lack of education; they then, apparently, decide to finish school. The Condition of Education, published by the Department of Education in 1986, found that students take multiple routes to complete high school or receive an equivalent degree (Mary Frase, 1988). Some leave and return to the system several times before earning their degrees. The majority completes their education by receiving an equivalency degree. Use of the General Educational Development Test (GED), the most widely used equivalency degree, has risen almost 250 percent between 1967 and 1987 (Carnegie Foundation, 1989). Although completion of the GED does not require "regular" classroom attendance, it does require proficiency in core subjects. Yet, these students routinely are counted as dropouts. Because states and school districts calculate dropout rates using varying definitions, it is often impossible to determine if the same criteria are being compared. The Dallas school district, for example, tracks students between ages 13 and 21, while the Atlanta school district tracks students in all grades -- including elementary. Consequently, dropout rate comparisons are meaningless between Dallas and Atlanta.

How NCES Reports Dropout Rates

The U.S. Department of Education's National Center for Education Statistics (NCES) reports three types of dropout rates:

- Event rates reflect the percentage of students who drop out in a single year without completing high school;
♦ Status rates reflect the percentage of the population in a given age range who have not finished high school or are not enrolled in school at one point in time; and

♦ Cohort rates reflect the percentage of a single group of students who drop out over time.

Status rates are higher than event rates, since they reflect the number of students in a given age range who have dropped out of school over a number of years, rather than a "snapshot" of one year. For example, the national event dropout rate in grades 10 through 12 for 1993 was 4.5 percent, while the 1993 national status dropout rate for 16- to 24-year-olds was 11.0 percent.

Discrepancies in Dropout Rates Calculation

Today, the problem of establishing how the dropout rates are determined seems daunting. To begin, it is a time-honored debate in the dropout literature about just what constitutes a dropout by definition.

Hahn (1987) goes so far as to say: among the thousands of school districts in the U.S., it sometimes seems that no two, count dropout rates in the same way. Their statistics are not always accurate, and their methods of calculating the dropout rate vary from year to year and from school to school (p. 257).

School dropouts are defined in a variety of ways and so provide differing data bases for subsequent calculations. Two examples may be illustrative. Mensch & Kandel (1988) define a dropout as "any one whom we could determine interrupted his or her high school education at some point, including terminal dropouts, individuals who returned to school and obtained a high school diploma, and those who obtained a GED" (p. 98). The
state of Texas, in H.B. 1010 (passed in 1987) defines a dropout as a student: "1) who does not hold a high school diploma or its equivalent, 2) who is absent from the public school in which the student is enrolled for a period of 30 or more consecutive days, and 3) whose attendance within that period at another private or public school cannot be evidenced" (IDRA, 1989). Clearly the former definition will result in a greater count for dropouts than the latter because it includes in its dropout statistics those who have returned to school or have received a GED.

Gaustad (1991) reports that the definition of a dropout varies widely, with different states, districts, and even schools within districts using the term differently. For example, some districts may not include students who drop out over the summer, or who leave school to get married, while others do include them in the dropout total. In addition, some districts may keep more complete records than others. For example, some districts follow up on students who do not return after the summer to determine whether or not they are enrolled in other schools, while other districts do not. Other variations may include whether or not certain types of non-traditional students (i.e., those who leave regular high school before graduation to enter correctional institutions, enroll in GED programs, or enter college) are counted as dropouts until they have completed an equivalency program (McMillen et. al., 1994).

Although a move towards standardization is both a necessity and indispensable, Natriello, Pallas, & McDill (1986) warn that many of the problems that hinder an accurate assessment of the dropout problem are political in nature. They argue that "it is often in someone's interest to minimize or exaggerate the dropout statistics, but seldom in anyone's interest to produce precise figures" (p. 435). When clamoring about the dropout
problem, agencies which seek funding for research on dropouts or who have a political agenda, which is enhanced by obtaining large dropout numbers will maximize the figure to get more attention. On the other hand, when counting students in order to retain funding, schools will minimize the dropout rate by using those figures that reduce the count.

Characteristics of High School Dropouts

Some characteristics are common to a majority of dropouts: attendance patterns, family and ethnic background, geographic location, and socioeconomic status. Not surprisingly, those who have problems with truancy or trouble with the law or those whose grades are below average are more likely to drop out than other students. A parent's educational background also seems to influence whether a student drops out. In 1985, some 55.1 percent of high school dropouts came from families in which the head of the household had not completed four years of high school. One study found that students whose fathers did not complete high school were 250 percent more likely to drop out than children whose fathers were college graduates (Stephen M. Barro, 1987).

The most comprehensive study of issues relating to dropping out, entitled Descriptive Information from High School and Beyond (HS&B), published in a series beginning in 1981 by the Department of Education, tracks the 1980 high school sophomore class from that year until 1986. (The first follow-up was conducted at the class's expected graduation date in spring 1982. The second and third follow-ups were conducted in 1984 and 1986. Approximately 30,000 sophomores participated in the first follow-up; by the third follow-up approximately 13,400 participated.) The HS&B study finds:
➤ That students from families with little or no English-speaking background drop out at a much higher rate than those from an English-speaking household;

➤ That students with one parent drop out at a much higher rate than those where both parents were present; and

➤ That students from public schools drop out more frequently than those from Catholic schools.

➤ Fewer than 5 percent of all students were pregnant or married by the first follow-up in 1982. However, of those that dropped out by 1982, approximately 20 percent were pregnant or married (Stephen M. Barro, 1987).

Context for the At-risk and Dropout Problem

Although, school dropout problem is often characterized as a "minority problem," it is in fact a significant problem among the "majority" as well. One recent study reports that 61% of all students who drop out of high school are Anglo, 23% are Hispanic, and 16% are African-American (Asian and Native American dropouts were not included in this statistic) (Markey, 1988). Therefore, in reality, the majority of dropouts are Anglo rather than members of minorities when dropout rate calculation is based on general population instead of racial composition.

However, when the analysis considers the representations within various demographic categories, the picture becomes much more meaningful. What emerges is a view that despite the fact that minorities constitute only about 40% of all dropouts, they
are disproportionately represented in the dropout statistics. The most comprehensive longitudinal data set from the "High School and Beyond" (Peng, 1983, cited in Wagenaar, 1987) study established national dropout rates for Hispanic students at 18%, for African-American students at 17%, for Anglo students at 12%, and for Asian American students at 3%. American Indians and Alaskan natives have a 29% dropout rate (Peng, 1983, cited in Wagenaar, 1987). The numbers provide some evidence that all students are not, in fact, equal and send a clear message that the dropout problem is perhaps the most important one facing our schools today. Why Johnny can't read may be seen as a problem superseded only by why Johnny or Jane can't stay in school.

Many studies also seem to indicate that social class differences have an impact on dropout rates. Ekstrom, Goertz, Pollack, & Rock (1986) found that dropout rates vary across three social class groups. The low socio-economic status (SES) group has a 26% dropout rate, while the middle SES group's is 13%, and the high SES group's rate is only 8%. There are a number of characteristics typifying different social classes which are thought to account for these discrepancies. Among those different characteristics which emerge are level of educational aspirations and educational attainment by parents (Wehlage & Rutter, 1986), time spent with children (Poole & Low, 1982), study aids in the home (Rumberger, 1983), the role models provided by parents and siblings (Hill, 1979; Shaw, 1982) and satisfaction with family relationships (Beck & Muia, 1980). When considered in combination with race, Weidman & Friedman (cited in Wagenaar, 1987) found that among families with annual incomes of less than $10,000, about 66% of African-American students and 35% of Anglo students dropped out. Although other researchers have not found such significant interaction effects (Ekstrom et al., 1986;
Rumberger, 1983; Wehlage & Rutter, 1986), it is likely that there is some association between the two. For example, recent studies by the Texas Education Agency (TEA) have provided evidence that there is a high degree of correlation between SES and school achievement (TEA, 1998).

When considering regional differences in the dropout rates, Rumberger (1987) provides statistics for the entire country. The latest figures "show an average attrition rate of 29.1% for high school class 1984 [cohort] in the U.S., with state-level attrition rates varying from a low of 10.7% in Minnesota to a high of 43.3% in Louisiana" (Rumberger, 1987, p. 104). Nine states and the District of Columbia have an astounding dropout rates of 35% or greater (ranging from 35.4% in Texas to 44.8% in the District of Columbia), while ten states have the lowest dropout rates of approximately 20% or less (ranging from 20.9% in Connecticut to 10.7% in Minnesota).

Sadly, it appears as though there are significant geographic implications to the dropout problem as well. Living in the southern part of the United States seems to increase the likelihood of leaving school before graduating (seven of the ten states with the highest dropout rates are in the south - Alabama, Florida, Louisiana, Georgia, Mississippi, South Carolina, and Texas). Living in the North or Midwest may actually increase the likelihood of graduating from high school (Connecticut, Vermont, Iowa, Ohio, Minnesota, Wisconsin, Nebraska, North Dakota, and South Dakota have the lowest dropout rates). Whether causal or correlational, direct or indirect, there appears to be a strong association between geography and dropping out of school.

Finally, there are significant differences among grade levels with regard to when students are most likely to drop out. The most recent figures for the state of Texas
provide a representative example of the variable risk according to grade level. Clearly the 9th grade represents the point at which the largest number of students leave school. Of all students who drop out of school between the 7th and 12th grades, nearly 30% are 9th graders. This ninth grade attrition rate is nearly half, again as large as the next highest attrition rate of just over 20% in 10th grade. The pattern seems consistent across ethnic and racial groupings. Obviously there are forces at work which propel students out of school in disproportionate numbers in their first year of high school.

Regardless of how the pie is sliced demographically, the rate at which secondary students drop out of school can hardly be ignored. Too many of those who begin school fail to finish. Members of some minority groups and those who live in certain geographic regions are tragically at increased risk. In the next section, the costs of dropping out and being at-risk for dropping out will be explored in an effort to estimate its impact on both society and the individual.

Reasons for Dropping Out

Providing a summary of the reasons and factors which contribute to being at-risk of leaving school early, aside from the more concrete demographic and background factors by past research, is problematic at best. A review of the literature indicates that the categories can be as few as 4 - school-related, work-related, family-related, and other (Mann, 1986) - or as many as 24 (California State Department of Education, 1986). What most researchers agree on, however, is that there are multiple reasons that lead to a student's being at-risk of making a decision to drop out of school. Those reasons may include factors related to current family obligations, family conditions, attitudes about
school, and the lure of paid work outside the school (McDill, Natriello, & Pallas, 1986). The category system below should provide a sufficiently extensive, even if not comprehensive, summary of the reasons for students leaving school early.

**Family and Work Factors**

Those non-school factors which appear time and again in the literature fall into three major categories: 1) economic considerations; 2) pregnancy and marriage; and 3) activities outside of the school which are unrelated to the school.

The economic situation faced by students is by no means uniform. Those of different socio-economic strata experience very different pressures. It comes as no surprise that those in the lower stratum too often leave school in order to help support the family financially or to help out at home (Ekstrom et al., 1986; Fine, 1986; Markey, 1988; Rumberger, 1987; 1983). In fact, Markey (1988) found that in his sample, approximately 40% of his male subjects cited getting a job or needing to support the family as a reason for dropping out. For females, the corresponding figure was approximately 19%. Additionally, the lure of paid work along with its attendant sense of freedom and immediate gratification is often too strong. There appears to be a threshold for combining work and school with consequences being dire if the student works more than 15 hours a week (Markey, 1988).

Another common non-school related reason for leaving was reported as being either to get married or because the student was pregnant (Barber & McClellan, 1987; Ekstrom, et al., 1986; Fine, 1986; Markey, 1988; McDill et al., 1986; Rumberger, 1987; 1983; Strother, 1986). Neill (1979) reported that "About 1 million adolescent girls -
nearly 1 in 10 - conceive each year, and 600,000 young women carry their pregnancies to full term.... An estimated 400,000 pregnant teens are under 17 years of age" (p. 32).

McDill et al. (1986) further indicate that eight out of ten teens under 17 who have their babies never finish high school. Finally, Markey (1988) found that approximately 54% of young women cited pregnancy or marriage as a reason for leaving school. For young men, the figure was less than 7%.

The third non-school related reason for leaving school involved activities which were not school sponsored (dances, clubs, sports, etc.) (Ekstrom, et al., 1986; Howard & Anderson, 1978; McDill et al., 1986). Dropouts and students at risk are more likely, for example, to go out on dates and drive around during the evenings (Ekstrom et al., 1986). Particularly well represented in this category of reasons for dropping out is involvement with peers. One of the variables which distinguishes dropouts from "stayers" is the peer group with which the student identifies and from whom the student seeks validation and support. Students who leave school are more likely to have friends who have also dropped out (Fine, 1986). Among Native Americans, Coladarci (1983) discovered that "over a third of dropouts reported that the desire to be with other dropouts was a salient factor in their decision to drop out" (p. 20). For young African-American students, Williams (1987) concludes:

The importance of friendship to graduates and their higher incidence of graduate friends seems to demonstrate the role that peer influence and peer affiliation play in promoting the goal of high school completion. The dropout, lacking this network of peer support...receives less profit from the ancillary
aspects of the educational exchange including peer group relationship (p. 318).

Because potential school leavers are not participants in the school network, they seek a network elsewhere. Lacking support at school, Howard and Anderson (1978) found that dropouts leave this disagreeable situation to join friends who validate their worth and so come into contact with peers, parents, and siblings who may have dropped out and do not value education highly.

Finally, Hess et al., (1987) observed that students crave recognition and support from teachers, but if that support is not forthcoming, they can and do seek recognition from gangs. It is not hard to see the pattern and the negative spiral which emerges when students lose the feeling of belonging and positive self-worth in school. Left to seek it on their own, they will find support where they may, perhaps to their ultimate detriment.

Problems with Attitudes About School

The pervasive sense of estrangement among dropouts and those at-risk stems not only from poor teacher-student interactions, but also from the students' attitudes about various other facets of their school experience. Among them is a prevailing dislike of school in general (Rumberger, 1987; 1983; Strother, 1986), a dislike of specific schools (Strother, 1986), and even a dislike of particular courses (Barber & McClellan, 1987). Further, students report boredom and a dislike for discipline and rules (Barber & McClellan, 1987).

Other research has found that students who drop out feel that there are no jobs even if they do graduate; that a diploma does not guarantee a good job (Fine, 1986; Ogbu,
1981; 1974); or that school is not important to what they want to do in life (Coladarci, 1983). In each case, school is seen as irrelevant to the future they see for themselves. In addition, Ekstrom et al. (1986) found that dropouts feel they are less popular with other students whom they feel do not see them as "good students, as athletes, or as important" (p. 360) but rather as troublemakers. They also found that among females who dropped out, more traditional gender-role attitudes were likely to be found (ex. "Most women are happiest when making a home" and "It is usually better if the man is the achiever and the woman takes care of the home" [p. 362]).

Finally, Howard and Anderson (1978) determined that among the lower class, there is a "cult of immediacy" which impairs the chances of success. Those in the cult of immediacy sacrifice long-term outcomes (graduation, college, careers) for short-term satisfaction (money from jobs for designer clothes, cars, and other attractive consumer goods). In particular, the lower-class child "is not prepared to be studious, obedient, and docile" (p. 225) and so comes into conflict with the predominantly middle-class teachers and schools.

School Related-Problems

It has been argued that lack of academic success "is the best predictor of dropping out" (Wagenaar, 1987). Consistent with that view, a history of school failure beginning in grade school and continuing in high school too often induces students to leave school before graduating (DeRidder, 1988; Fine, 1986; McDill et al., 1986; Rumberger, 1987; 1983; TEA, 1998).

This academic failure and the retention in grade which frequently accompanies it, leads students eventually to feel too old for school (Barber & McClellan, 1987) thus
compounding their problems. In fact, being "behind grade" (being behind original cohort one or more years) has been found to increase the potential for dropping out (Strother, 1986; Stroup & Robins, 1972). More specifically, Mann (1986) found that "being retained one grade increases the risk of dropping out later by 40-50 percent, two grades by 90 percent" (p. 308). In Chicago, the dropout rate was 37% for normal age freshmen, but 60% for those one year behind, and 69% for those two years behind (Hamilton, 1986).

Critics of schools also have made the case that schools are not responsive to students, not individualized enough, and are culturally inconsistent with community or student culture (Natriello et al., 1986). McDill et al. (1986) believe schools lose students because task structures in the classroom are undifferentiated, curricula are narrow (traditional academic subjects), students have little autonomy, and classes are unidimensional (overreliance by teachers on workbooks and tedious seatwork as means for classroom management). The patterns of interaction which typify African-American or Hispanic homes may also be inconsistent with those which typify the school. Too, the informal nature of adolescent peer social interaction may be inconsistent with the more formalized interaction which is found in most classrooms.

A structural pattern that is common in schools and has been found to affect student success and failure is academic tracking. In academic tracking, students who work at particular levels are grouped with others like themselves and are kept together over the long term (high, regular, and low achievers are common classifications). Sexton (1961) has written that "classification itself... generates self-fulfilling prophecy of success or failure" (p. 58). As a consequence, performance has been found to improve in
higher tracks (groups of high achievers) and deteriorate in lower tracks (low achievers) (Barker Lunn, 1970). Schwartz (1981) discovered that those in the classes she observed who were relegated to the lower tracks developed expectations and patterns of interaction which subverted not only their own learning, but the learning of others in the class. Examples of the subversive interactions included "put downs" targeted at those who did well, questions like "who do you think you are, doin' so good?" and talking to each other in competition with the teacher. In this case, the powerful force exerted by peer pressure to conform appeared to be the mechanism acting within the school structure to subvert learning. As a logical extension, the subversion of learning is likely to increase the chances of dropping out of school for those whose efforts to succeed are undermined.

School size also has an impact on the ability of schools to retain students. Pittman & Haughwout (1987) studied schools of various sizes and found that the larger the school, the greater was the frequency of dropouts. They discovered that academic program diversity (more program availability and course offerings), and school social climate (magnitude of problems - such as drugs, gangs, pregnancy, etc.) were positively correlated to higher rates of early school leaving. This last finding suggests that in schools where the climate for learning is constantly threatened with disruption, where drugs and violence are excessive, and where racial tensions may be high, there is a greater likelihood that students will drop out in larger numbers.

Other structural and school related problems include lack of sufficient academic credits for graduation (Strother, 1986), frequent absenteeism, being expelled or suspended from school (Stroup & Robins, 1972; TEA, 1989), and, schools "pushing out" students for academic and behavioral reasons (Fine, 1986).
Impacts of the Student Tracking On School Dropout

The school-tracking debate has been one of the most contentious school reform issues. Since 1954, the United States has made significant strides in opening the schoolhouse door to many children who were excluded from educational opportunities prior to that time. Public laws on both federal and state levels now affirm that all children have a right to a free, adequate, and appropriate public education. But when we begin to examine the opportunities we offer our children once they enter that schoolhouse door, and when we begin to look at how these opportunities differ according to race and economic status, we begin to see that, we do not live up to the true meaning of our creed (Wheelock, 1992).

Tracking is the most commonly used term for ability grouping. Traditionally, schools have responded to student diversity and poor academic performance with approaches such as ability grouping, grade retention, special education, and pull-out programs -- in which students are removed from their regular classrooms and offered remedial instruction in particular subjects (Letgers, McDill, & McPartland, 1993). As harmless as it seems, research has dramatically demonstrated that, this practice has done more harm than good. The tracks covered distinctly different curricula, were binding across all academic subjects, and led to different destinations upon graduation. Three tracks were common:

1. A high track, with college-preparatory or honors courses that readied students for admission to top colleges and universities;

2. A general track that served as a catch-all for the huge group of students in the middle, those neither gifted nor deficient in their studies or those simply unsure of what they would do after high school, and
(3) A low track, consisting of vocational courses and a smattering of low-level academic offerings, such as consumer math, and serving mainly low functioning and indifferent students.

After graduation, general track students matriculated to second-tier colleges, community colleges, or the workforce. Low track students frequently dropped out, found work, or suffered periods of unemployment (Rosenbaum 1976; Shafer and Olexa 1971; and Heyns 1974).

After 30 years of practice, however, researchers and educators (e.g., Slavin, 1987; Oakes, 1985) now believe these approaches may actually reduce student engagement and learning opportunities while stigmatizing students. The question at the heart of the tracking debate is how best to educate large numbers of students whose backgrounds and abilities differ widely.

In the late 1970s and early 1980s, there was a growing awareness of the negative consequences of ability grouping in the elementary grades and tracking in secondary schools. Research by Robert Slavin of Johns Hopkins University, and books such as Jeannie Oakes' Keeping Track: How Schools Structure Inequality and Anne Wheelock's Crossing the Tracks: How "Untracking" Can Save America's Schools, helped alert educators and policy-makers to the problems with tracking; they also pointed toward potential alternatives. People such as Slavin, Oakes, and Wheelock argued that in many schools, tracking institutionalizes inequality and leads to lower expectations and less rigorous course work for students in the bottom tracks. They also found that such tracking does not benefit the students in the upper tracks, as is commonly assumed. As Oakes, an assistant dean in the Graduate School of Education and Information Studies at
UCLA, wrote, "No group of students benefits consistently from being in a homogeneous group."

At the same time, community groups in some areas took up the issue, even to the extent of going to court. In essence, they viewed the struggle against tracking as a continuation of the movement to abolish separate but unequal schools - although in this case the focus was on nominally integrated schools that were highly segregated by classroom. In any case, the unequal and segregated schooling denied minorities full access to equal opportunities. Furthermore, the sorting of students into groups of "haves" and "have-nots" contradicts American values of schools as democratic communities of learners that offer equal educational opportunity to all.

Also, with the succession of publications that included *A Nation at Risk* (1983), *A Nation Prepared* (1985), and *Workforce 2000* (1987), it became clear that the world was changing and that America's educational system needed to change with it. The message inherent in this research was that in order for America to stay strong and compete in the global economic markets of the future, all students need to have access to a quality education through equal educational opportunity. This message led to doubts about a number of educational policies, among them tracking and ability grouping.

Arguments for Student Tracking:

According to the proponents of the tracking system, it is easier to teach relatively homogeneous classes and unrealistic to expect everyone to master the same curriculum. They contend that students feel more comfortable and learn better when they're grouped with peers of similar abilities. And they say tracking enables teachers to tailor instruction to the needs of respective groups of students. How, after all, can the same English teacher
in the same class prepare some students for the Advanced Placement test in literature while others are still struggling with basic grammar?

In August 1999, the influential Thomas B. Fordham Foundation headed by Chester Finn, a conservative education guru, published a 27-page report arguing that tracking isn't really all that bad, and in fact may be good. The report, "The Tracking and Ability Grouping Debate," was written by Tom Loveless, an Associate Professor of Public Policy at Harvard. In the report, Loveless argues that criticisms of tracking are "mostly unsubstantiated by research" and that "evidence does not support the charge that tracking is inherently harmful."

Most of the tracking system advocates argue that the transition to mixed-ability grouping (heterogeneous system) may hurt gifted and other high-achieving students who have done well in an accelerated program of study. Some parents do not want to see their children's progress slowed down, as they perceive it would be, in order to accommodate slower learners.

Arguments against Student Tracking:

Critics charge that tracking perpetuates race and class segregation by disproportionately assigning minority and poor children to low tracks and white, wealthy children to high tracks. They contend that tracking not only fails to benefit any student, but that it also channels poor and minority students into low tracks and dooms a vast number of students to an impoverished education.

Students who are placed at risk due to poverty, race, ethnicity, language, or other factors are rarely well served by their schools (Hilliard, 1989; Letgers, McDill, & McPartland, 1993). They often attend schools where they are tracked into substandard
courses and programs holding low expectations for learning (Oakes, 1985; Wheelock, 1992). If schools are to achieve the desired goal of success for all students, they must hold high expectations for all, especially this growing segment of learners. They must view these students as having strengths, not "deficits," and adopt programs and practices that help all students to achieve their true potential.

Tracking does not result in the equal and equitable distribution of effective schooling among all students. Instead, tracking allocates the most valuable school experiences -- including challenging and meaningful curriculum, engaging instruction, and high teacher expectations -- to students who already have the greatest academic, economic, and social advantages, while students who face the greatest struggles in school and in life receive a more impoverished curriculum based on lower expectations for their capacity to learn.

Differences in context and climate have also been described at the secondary level. First, college-track students take more academic courses than students in other tracks, contributing to their achievement advantage (Gamoran 1987). Second, observers report that high-track teachers are more enthusiastic and spend more time preparing (Rosenbaum 1976, Oakes 1991). Teachers may compete for the opportunity to teach honors and accelerated classes, and those with more experience or better reputations tend to win the privilege (Finley 1984, Oakes 1991). Although problem solving and critical thinking are not especially common, they are more likely to occur in high tracks than low tracks (Oakes 1985, Gamoran and Nystrand 1990). In contrast, low-track instruction tends to be fragmented, emphasizing worksheets and recitation (Page 1992). Teachers in low-track classes spend more time on behavior management and less time on instruction.
(Oakes 1985). Lacey (1970) and Abraham (1989) contended that tracking polarizes the student body into "pro-school" and "anti-school" groups. The 1990s survey research supports this claim: Berends (1991) found that college- and non-college-track students differ more over time in the extent of disciplinary problems, in engagement with schoolwork, and in expectations for future schooling.

Inequalities in learning conditions extend to other aspects of school life. As Jonathan Kozol has documented in *Savage Inequalities: Children in America's Schools*, students who face enormous hurdles of poverty and discrimination in their personal lives also attend schools that are intellectually and physically inhospitable places for learning. In these schools, textbooks and library resources are woefully inadequate, virtually ensuring that many students will not master grade-level material regardless of their effort or ability. The absence of modern learning tools such as computers further cripples student achievement. In this context of "scarce resources," poor schools may be forced into allocating advantages according to their estimation of which students are "most deserving," institutionalizing greater opportunity for some while leaving others to manage without.

Trimble and Sinclair (1988) and Oakes and Lipton (1992) (both cited in Century 1994) point out that a disproportionate number of minority and low-income students are placed in low-ability groups and tracks. Students in low-ability tracks tend to receive lower-quality instruction.

Their instruction covers less content, involves more drill and repetition, and places more emphasis on classroom management tasks (Dreeben & Gamoran, 1986; Gamoran, 1986, 1987; Gamoran & Mare, 1989; Oakes, 1985, 1989; Sorensen & Halinan,
Students in low-ability tracks have difficulty moving out of low tracks into higher tracks (Century, 1994).

In the resolution passed in 1977, NCTE (the National Council of Teachers of English) condemned the "transformation of the English language arts curriculum from a holistic concern for language development to sequenced but isolated and often unrelated sets of reading and writing skills"—practices that often occur in lower tracked classes—and urged "that NCTE actively campaign against testing practices and programs which, masquerading as improved education for all children, actually result in the segregation and tracking of students, thus denying them equal education opportunity."

Segregation of students based upon the perception of ability denies equity in education by denying students the right to participate in the richest language environment possible. NCTE's "Strategic Plan" General Objective 7 states: "The Council promotes the institutional, instructional, and community conditions under which literacy best develops"; therefore, the Council promotes the elimination of tracking students in language arts classes.

Professional organizations other than NCTE which endorse efforts to eliminate the negative effects of ability grouping include the following: the National Education Association, the International Reading Association, the Carnegie Commission (Turning Points, 1989), the College Board (Equity, 2000, 1992), the National Governor's Association, the National Association of State Boards of Education, the National Council of Mathematics, the National Science Teachers Association, the Education Commission of the States, the Council for Basic Education, the National Coalition of Advocates for
Students, the Committee on Policy for Racial Justice, and the Massachusetts Department of Education (Locked In/Locked Out).

The NMCP Legal Defense Fund, the ACLU, and the Children's Defense Fund all have raised tracking as a second-generation segregation issue. And the U.S. Department of Education's Civil Rights Division has targeted tracking as critical in determining racially mixed schools' compliance with Title VI requirements for categorical programs.

To ensure educational equity and excellence for all America's youth, National Association of School Psychologists (NASP) supports the creation of inclusive classrooms that are based on the belief that all students can learn—a core value of all schools in a democracy. NASP believes that tracking, or whole class ability grouping, is not consistent with that core value. Extensive research on ability grouping has documented the following negative effects:

- Students with lower ability achieve less in lower track classes than in mixed ability classes.
- Students with higher ability do not achieve more in tracked classes than in mixed ability classes.
- Placing students with lower ability in tracked classrooms reduces self-esteem, with a particularly negative effect on students' sense of their own academic competence.
- Tracking students reduces the likelihood that students placed in lower track classes will choose college preparatory courses.
• Tracking students reduces opportunities to develop relationships among students from other racial, ethnic, and socioeconomic groups and has a negative effect on race relations.

• The placement decision concerning ability grouping is often made very early in a student's school career, is often based on questionable data, and is enduring. NASP believes that grouping students heterogeneously offers advantages unavailable in schools that track. When implemented appropriately, heterogeneous grouping:
  • Gives all students equal access to an enriched curriculum and the highest quality instruction schools have to offer;
  • Avoids labeling and stigmatizing students with lower ability;
  • Promotes higher expectations for student achievement;
  • Reduces in school segregation based on socioeconomic status, race, gender or ethnicity, or disability;
  • Encourages teachers to accommodate individual differences in students' instructional and social needs;
  • Enables students to learn from their peers, including students whose background may be very different from their own; and
  • Emphasizes effort more than ability.

Literature and Research Finding:

Researchers have struggled for decades to find answers to questions about ability grouping. Does anyone benefit from it? Who benefits most? Does grouping harm
anyone? How? How much? Why? Research reviewers have never reached agreement about the findings. For every research reviewer who has concluded that grouping is helpful, another has concluded that it is harmful (Kulik, 1992). The question at the heart of the tracking debate is how best to educate large numbers of students whose backgrounds and abilities differ widely. Many studies of tracking have found that the practice has little, if any, direct impact on student achievement (Gamoran, 1987; Slavin, 1990; Slavin, 1993).

Reba Page

Reba Page's 1991 study, *Lower Track Classrooms*, reports on the daily activities of eight low track classes, documenting how they often function as caricatures of high tracks, how teachers and students in low tracks make deals to not push each other too hard so that they can cope with their environment. How low tracks are used as holding tanks for a school's most severe behavior problems. The low tracks that focus on academics often try to remediate through dull, repetitious seatwork.

Jeannie Oakes

Studying the Rockford Public Schools in Illinois and the San Jose Unified School District in California in 1993, Oakes found that both school systems had created racially imbalanced classes at all three levels--elementary, middle, and senior high--and that, ironically, students were not "tracked" by ability, even though the schools' own rhetoric supported this practice. Racial/ethnic differences rather than achievement differences provided the primary characteristics differentiating so-called higher and lower "track" classes. White students (and Asian Americans, in San Jose) were consistently over-represented and African American and Hispanic students were consistently
underrepresented in high-ability classes in all subjects (Oakes, 1995). African American and Hispanic students were consistently over-represented while white and Asian American students were consistently underrepresented in low-ability classes in all subjects.

The fact was that classes specifically designated for students at a particular ability level actually enrolled students who spanned a very wide range of measured ability. Furthermore, while the overall average achievement score for students in the low tracks was less than the overall average score for students in the standard or accelerated tracks, the extraordinarily broad range of achievement in each of the three tracks (low, standard, and accelerated) made it clear how far these tracks were from traditional ability groups. In short, the districts' practices represented a racially motivated, rather than ability motivated, grouping that amounted to within-school segregation.

Even worse was the finding that in both school systems, African American and Hispanic students in lower track classes had fewer learning opportunities. Teachers expected less of these students and gave them less exposure to essential knowledge and skills. Lower track classes also denied African American and Hispanic students access to a whole range of resources and opportunities, including highly qualified teachers, classroom environments conducive to learning, opportunities to earn extra grade points to bolster grade point averages, and courses that qualify students for college entrance and a wide variety of careers as adults.

Finally, and perhaps worst of all, the academic achievement of African American and Hispanic students suffered over time. In Rockford, the achievement gaps (the difference in average group achievement scores) between white and African American
students that were present in the first grade did not diminish in higher grades. To the contrary, 11th graders exhibited gaps somewhat larger than 1st graders. In San Jose, those who were placed in lower level courses—disproportionately Hispanic students—consistently demonstrated a lesser gain in achievement over time than their peers who were placed in high-level courses did. These results were consistent across achievement levels: whether students began with relatively high or relatively low achievement, those who were placed in lower level courses showed fewer gains over time than students who were placed in higher level courses.

National Study:

Although the study of Rockford and San Jose represents only two districts, other studies have also demonstrated that tracking is a more widespread phenomenon, and that students are often placed in courses or classes by racial/ethnic subgroups. According to data compiled by the National Educational Longitudinal Study of Eighth Graders in 1988 (NELS: 88), African-American, Latino, Native American, and low-income eighth graders are twice as likely as white or upper-income eighth graders to be in remedial math courses. Not only do students in remedial settings receive a less demanding curriculum; their teachers are also more likely to be less experienced in the classroom. For example, researcher Lorraine McDonnell and her colleagues found that teachers in 42 percent of the remedial, vocational, and general mathematics sections have been teaching for five years or less, compared with 19 percent of the pre-algebra and Algebra 1 sections.

Other studies using the same National Educational Longitudinal Study (NELS) data revealed that nationally only 14 percent of 8th grade students were enrolled in mathematics classes that their teachers characterized as mixed ability. Similarly, only 11
percent of 10th grade mathematics students in public schools across the nation were judged by their teachers to be in mixed-ability classes; for science, the corresponding figure was 12 percent (Brewer et al., 1995; Braddock and Dawkins, 1993). Unfortunately, perceived ability level all too frequently was virtually identical to racial group membership.

One of the earliest and best-known studies was conducted by Jeannie Oakes, who is now a professor and an assistant dean of the graduate school of education and information studies at the University of California, Los Angeles. Looking at a national sample of 25 schools, she found that poor and minority students were disproportionately placed in the lower tracks. There, they encountered less qualified teachers, thinner curricula, and poorer instruction than their high-achieving counterparts.

In her 1985 book, *Keeping Track*, Ms. Oakes concurred: "The results differ in certain specifics, but one conclusion emerges clearly: No group of students has been found to benefit consistently from being in a homogeneous group."

As a result, some school systems began to abolish the practice—usually over the protests of well-heeled parents of gifted and high-achieving students. When some large urban districts didn't detrack, federal courts sometimes ordered them to do so as part of desegregation cases.

Alternatives to Tracking: (Detracking/Untracking)

In light of the growing awareness of the real costs of tracking and greater familiarity with heterogeneous classroom methodologies, schools across the country are being demanded by the opponents to switch from practices that result in unequal access
to knowledge to superior approaches designed to provide equal educational opportunity for all students called "detracking" or "untracking."

"Untracking" schools are schools that are replacing the grouping of students by ability for purposes of instruction with mixed-ability grouping. These schools make these grouping changes in tandem with changes in curriculum, teaching approaches, and assessment strategies designed to strengthen learning for more diverse groups of students. These schools also adopt school routines and structures redesigned to extend expectations for success to all students and foster a strong sense of the school as a community of learners. Moving into uncharted territory, untracking schools create new conditions for learning and teaching and, in the process, redefine their own character in relation to a commitment to discover and nurture genius in all their students (Wheelock, 1992).

Untracking requires abandoning a strategy that sorts student according to individual weakness in favor of one that groups students for collective strength. It requires a shift from nurturing the ability of some children to cultivating effort, persistence, and pride in work in all children. It requires moving from a mindset that defines good education as a scarce resource, with the "best" reserved for the most "deserving," to one that envisions a society in which good education is abundant enough for all. Untracking simply provokes a reconsideration of the purposes of education. In this information age, a democratic society cannot survive the unequal distribution of knowledge. In an era when knowledge is truly power, a redistribution of knowledge is both fair and necessary.

Increased awareness about the harm of tracking in and of itself has not been enough to bring about change. Nor have well-publicized findings of students' academic
and social needs provoked systemic reform. What schools have needed and what they have now are new ways of organizing curriculum and instruction so that all students can learn appropriate "grade-level" material in mixed-ability groups. New practices have demonstrated, for example, that:

- All students can benefit from the thinking-skills and enrichment activities often offered only to students labeled "gifted and talented." High expectations for all students can be communicated through school routines and classroom techniques, resulting in increased student effort and higher achievement for all.

- Cooperative learning and other innovative teaching approaches can deepen academic learning for all students while promoting self-esteem. Meaningful hands-on learning activities organized around themes can help students perfect basic skills and teach students to synthesize information from different sources, apply knowledge, and solve problems.

- Schools can successfully peel off the bottom levels of a grouping hierarchy -- courses labeled "basic" or "general" -- and expose all students to grade-level textbooks, activities, and expectations while providing extra support for students who need it.

Wheelock (1992) states that, while each school, in the process of untracking, begins to claim its uniqueness, untracking schools also share characteristics in common including a new emphasis on:

- Releasing intelligence rather than quantifying intelligence;
- Nurturing effort rather than defining ability;
- Building strengths rather than sorting according to weakness;
Developing dispositions and skills necessary for life-long learning across all knowledge areas rather than imparting particular information in a given subject area;

Stressing concepts rather than covering content;

Building on aspirations rather than circumscribing students' dreams;

Recognizing students as citizens of a learning community rather than as products of an assembly line.

Conclusion on Impact of Student Tracking System

"Most governments have been based on the denial of equal rights; ours began by affirming those rights. They said, some men are too ignorant, and vicious, to share in government. Possibly so, said we; and, by your system, you would always keep them ignorant and vicious. We propose to give all a chance; and we expected the weak to grow stronger, the ignorant, wiser; and all better, and happier together" (Abraham Lincoln, 1858).

Today schools know more about the nature of human intelligence itself. While it would be unrealistic to claim that individuals enter life with identical abilities; nonetheless, intelligence is not fixed forever at birth. Human beings can learn intelligent behavior and can become intelligent, and what students learn depends to a great extent not on an "I.Q. factor" but on learning environments that equip them to use their intelligence as life-long learners, citizens, parents, and workers (Wheelock, 1992).
Moreover, intelligence grows as students are challenged to apply learning in settings where they interact with others who have different strengths from their own. Schools and classrooms that include diverse learners and employ the instruction and curriculum that makes mixed-ability grouping work represent such settings. In social context, public schools must assure the public that all students, not just "the best," are prepared to take advantage of future opportunities.

Education in a democracy rests on purposes that extend beyond the goal of grooming children for their future participation in the labor market. In a democratic society, schools are moral institutions, and their purposes must include helping students to become good people. An education worthy of the name must first nurture students' full potential for participation as citizens in the human community. As schools detrack, they fulfill their historical responsibility not only to help individuals improve in life but also to strengthen the foundation for more just, inclusive, democratic, and productive communities.

As the implications of changing social conditions become clear, and as more constituencies clamor for school accountability, tracking becomes more difficult to justify. Tracked schools, particularly those that relegate students most in need of expanded opportunity to levels that offer the least, fail to meet either the needs of changing social and economic conditions or pressures for accountability.

As a country we need to realize the long-term results of tracking. Then we must commit ourselves to educate all students. Only a change in philosophy of education -- away from the factory model -- can bring about needed results. Our country will not survive in its present form with anything less.
Problems with Student-Teacher Interactions

It would appear that there is widespread agreement that one source of displeasure with school for students who drop out is the relationship those students have with their teachers. Researchers have found that dropouts are dissatisfied with their teachers (Strother, 1986), do not get along with their teachers (Ekstrom, et al., 1986), had negative interactions with them (Pittman & Haughwout, 1987), and generally "had problems" in their dealings with them (Barber & McClellan, 1987). The reasons cited for this attitude about teachers stemmed from students' sense that teachers did not care about them, did not provide assistance, and did not encourage them (Barber & McClellan, 1987; Coladarci, 1983). Additionally, dropouts indicated that their interactions were tainted by teachers' disparaging attitudes towards students (Fine, 1986). Finally, this attitude by teachers led to a sense of disempowerment (Fine, 1986) and alienation of students from teachers (Wehlage & Rutter, 1986).

It is obvious from this litany of factors and reasons for dropping out, and being at-risk, that there are many different types of students who fall into each of those categories. Some are at-risk for many reasons, some for only a few. The student who is at-risk of dropping out for academic reasons may be different from one who faces economic or behavioral problems (although the problems may be related). Perhaps a different focus, a focus on at-risk and dropout student communication, will help shed more light on this complex problem.
Role of Communication in Dropping Out

While the nature of the communication in which at-risk students and dropouts engage has not been specifically addressed, it has been alluded to in much of the past research. To begin with, being at-risk of dropping out should be seen as a dynamic process which begins at some point that may be hard to pinpoint and ends with the student leaving the school environment before graduating. This process is constituted substantially through communication and involves a variety of actors in and out of the school environment.

Hess et al. (1987) critique the previous literature as not having looked closely enough at "how the 'high expectations' of staff [teachers] are actually communicated to students" (p. 340). Indeed, the complaint can be made about the lack of the same in terms of how expectations are communicated by parents, peers, and administrators.

Repeatedly, studies indicate that parental support and encouragement are important for success in school (Coladarci, 1983; DeRidder, 1988; Ekstrom et al., 1986; Felice, 1981; Fine, 1986; Rumberger, 1983; Wagenaar, 1987), but in none of them is there a description of that communication nor what constitutes support or encouragement.

Other research establishes that parents may actually discourage their children in their educational pursuits (Barber & McClellan, 1987; Howard & Anderson, 1978; Larsen & Shertzer, 1987), and only the last of these addresses communication explicitly. Parents, Larsen & Shertzer write, may "have an antagonistic or apathetic attitude about education and believe that graduation is not necessary for their children (Beck & Muia, 1980). These attitudes and beliefs are communicated verbally and behaviorally to the child creating even more conflict about staying in school" (p. 165-166).
A second source of encouragement and discouragement is the peer group or friendship network (Coladarci, 1983; Ekstrom et al., 1986; Fine, 1986; Howard & Anderson, 1978). It is not surprising, given the inherently social nature of the school, that peers play a significant role in the dropout process. Students with friends who have dropped out are at greater risk of dropping out than those who do not (Wagenaar, 1987). Interestingly, attrition seems to follow a pattern much like falling dominoes. When one member of a peer network drops out, it increases the chances of others in that group dropping out. In fact, the more influential the member is who drops out, the more likely some or all of the remaining members will drop out (Cortez, 1990). Coladarci (1983) and Hess et al. (1987) discovered that many of their subjects cited the desire to be with or to be supported and recognized by other dropouts as salient factors in the decision to drop out. It thus seems critical that how support and encouragement get communicated and from whom that support comes needs careful consideration.

Schools and the teachers in those schools also communicate support, expectations, and a sense of importance (or the lack of all three) to students. Schools themselves can be seen as communicating particular messages to the students who attend them. Hess et al., (1987) report that schools in Chicago were scheduling students to nonexistent study halls in order to claim full compliance with credits-per-semester directives from the district. They argue that "this scheduling communicates to students that school is not a serious enterprise, that their time is not important, and that they do not have to be present when they are scheduled to be" (p. 348). LeCompte (1987) takes an even harsher look at schools and writes:
Schools certainly look like dropouts. They are shabby and disheveled; even the best of them bore and frustrate teachers and students; they infuriate parents and policymakers who feel powerless to affect them; and, in some cases, they have become dangerous to the physical well-being of those who attend them (p. 233).

Although she is not explicit about what is communicated, it is not much of an inferential leap to conclude that schools, which are "shabby and disheveled", communicate to the students that they are not important enough to be taught in well maintained environments.

Teachers, it would seem, are in the position of most influence and are arguably the major players in the communication of (non) support and/or (lack of) encouragement to students at risk. It is teachers who must "communicate learning outcomes and acceptable standards of performance to the students" (DeRidder, 1987, p. 491). They must be able to communicate with the different levels of the socioeconomic and racial or ethnic population in the classroom" (DeRidder, 1987, p. 490).

Teachers seem to react to different groups of students in different ways based both on their perceptions of student capabilities and their own experience in school. Felice (1981) proposes that teachers often "perceive minority students as having decidedly less academic interest and ability...[and]...such teacher attitudes become a part of the chain of variables leading to self-fulfilling prophecy behavior on the part of the minority student" (p. 417). Schwartz (1981) found that teachers communicated more encouragement and support to students in higher tracks than to those in lower tracks. Larsen & Shertzer (1987) consider difficulty in communicating, in a general sense, with
teachers and other students as one characteristic of at-risk students. Finally, Fine (1986), in her ethnographic study, found that teachers who felt disempowered also were more likely to make disparaging and pessimistic remarks about students. Their attitudes manifested themselves in comments such as "These students are bad kids" and "The students can't be helped" (p. 399).

Finally, communication deficits with regard to the differences between the language spoken at home and that spoken in schools is reported as being an indicator of a child at risk (DeRidder, 1987; Heath, 1983; Howard & Anderson, 1978; McDill et al., 1986; Rumberger, 1987). The conclusions of these studies is not that students have trouble because they do not speak English, but rather that the language that they speak and have learned in their homes is not compatible with the "language of school." The language of school nearly always reflects the mainstream, middle class, Anglo society. That "language" is not necessarily consistent with the "language" spoken in the home.

Heath (1983) sees the force which compels students to fail as stemming from this socio-linguistic ("language") source. For her, the patterns of speech to which the children of the "lower" classes are socialized are in conflict with the patterns extant in the middle-class dominated schools. Poor African-American children and poor Anglo children are brought up with speech patterns which are not only different from the dominant societal pattern but are also different from each other. For example, in the home, the African-American children in Heath's study were never asked questions to which the questioner already had the answer. This puts those children into a state of confusion when the teachers asked them questions to which they knew the teachers had the answers. They did not understand why the teacher would ask such questions and so would not answer them.
Too, the African-American children in Heath's research began and ended activities as they became interested in or bored with them. The structure of the classroom that allocated specific times when certain activities were to be done posed unnatural constraints on the African-American children's behavior and caused problems.

In a similar ethnography, Philips (1983) found significant cultural differences between the Warm Springs Indian students and the predominantly Anglo school. The traditional patterns of interaction among the Native American students set them at odds with the classroom communication structure established by Anglo teachers. Among the problems was the Warm Springs children's cultural proscription against standing out and competing with others. The classroom culture reflected the dominant Anglo culture which encouraged competition and rewarded those who stood out from the others.

Another problem centered on the way the Warm Springs children were taught to display what they knew. In their own culture, they were taught to go off by themselves and practice whatever task was being required and when it was mastered, to come back and display the results to the teacher or other adult. In the Anglo school culture, students were to demonstrate how they mastered a task and were comfortable making mistakes in front of the teacher. These differences lead to substantial handicaps on the part of the Warm Springs children.

Because the research often has been so remiss with regard to the communication involved in the process of being at-risk and dropping out, it is the purpose of this study to address that issue directly. This communication perspective is intended to make a unique and important contribution to the study of at-risk high school students. More specifically,
a focus on the communication of social support is likely to go to the heart of the communication problems experienced by at-risk and dropout students.

Social Support

Given the foregoing discussion of at-risk students and those who drop out, it seems perhaps unnecessarily obvious to suggest that students at risk are too often at odds with their environment. The stress associated with being subjected to such a variety of forces is likely to become burdensome and even debilitating. To further suggest that students at risk are also in great need of support may seem equally evident. The previous review suggests this is true. Adolescents who are working too much outside school to help support families, who are pregnant, who consistently fail, who are at odds with school authorities, and/or who do not have both parents at home must somehow cope with the attendant stress if they are going to finish school. However, how they cope and to whom they turn for assistance is not currently well understood. To date the literature on dropouts and at-risk students has been generally silent on the topic of social support and how it is manifested.

It is relatively clear that at-risk students are in need of support from others. Further, it seem equally obvious that support and encouragement can come from a variety of sources: parents, friends, gang members, counselors, neighbors, teachers, and schools. Because of this, it seems necessary to investigate the construct of social support and the potential sources of it that are available.

To begin with, the concept of social support, like other broad constructs, resists concise definition. Kessler (1982) suggests that fundamentally "people need people not
only because of the material goods and services they provide; people need people inherently. They need intimacy, affiliation, nurturance, and the opportunity to play nurturant roles" (p. 260). While the need for social support may be innate, Veroff, Douvan, & Kulka (cited in Silver and Wortman, 1980) write that "informal support systems (family, friends, and neighbors) are probably the critical way that people in the new generation have adopted to deal with their life problems" (p. 309). Thus, it seems that social support in general is critical to well being and the sources for that support are increasingly found in social networks. Although social support is defined in a variety of ways by researchers and theorists, most seem to agree that "social support refers to social transactions that are perceived by the recipient or intended by the provider to facilitate coping in everyday life, and especially in response to stressful situations" (Pierce, Sarason, & Sarason, 1990, p. 173).

While the construct is often vaguely defined, researchers have approached social support in a variety of ways in order to better understand what it is and what it does. Kessler (1982), for example, makes a distinction between "perceived" and "objective" social support and "access" to and "utilization" of social support. "Perceived" social support is that which subjects themselves reported as being support. "Objective" social support was that which could be coded as such by an "independent" coder. Shumaker and Brownell (1984) focus on the process and conceptualize social support as an exchange between people that involves reciprocity and prosocial behavior. On the other hand, Gottlieb (1985), believes an understanding of social support can only be accomplished if we move away from viewing it as "a set of environmental provisions gained through transactions" and consider it a "cluster of personality traits, social beliefs, and self-
perceptions" (p. 357). In other words, social support is a perception which resides in the receiver and not in the environment.

House (1981) takes a functional perspective and concludes that there are four types of social support: instrumental, which involves concrete assistance (aid in kind, money, labor, time, modifying environment); informational, which involves the giving of information that may be used by the person receiving it for self-help (advice, suggestion, directives, information); appraisal support, which may take the form of information which may help a person reconsider events to make them less troublesome (affirmation, feedback, social comparison); and emotional support, which is the expression of concern (esteem, affect, trust, concern, listening). While this is not quite a definition, it does provide some sense of the dimensions along which social support may be understood to occur.

Taking a relational perspective, Clark (1983) makes a distinction between communal relationships and exchange relationships and the kind of social support each provides. She writes that "the major characteristic that distinguishes these relationships [communal] from other relationships is that members of communal relationships feel a special obligation, and usually a special desire, to be responsive to one another's needs" (p. 207). Exchange relationships, on the other hand, are those relationships where "members feel no special obligation or desire to be responsive to one another's needs beyond the feeling of responsibility most people have for any other human" (Clark, 1983, p. 207). These relationships involve give and take based on relatively short-term debts (such as loaning money, borrowing tools, sitting someone's dog) and are characterized by expectations of receiving something in return for support provided.
Finally, researchers have focused on the general categories of sources of social support and the kind of support that can be expected from each. Young, Giles, and Plantz (1982) define sources of social support as a natural network of "interpersonal linkages that exist for an individual because of family ties or friendships, personal accessibility (e.g., neighbors, co-workers) or community role (e.g., minister, police, teacher)" (p. 457). However, Shumaker and Brownell (1984) extend those sources to include support from strangers who are outside what is traditionally considered the support network (e.g., bartenders, hairdressers, cab drivers, etc.).

In an effort to consolidate these attempts to characterize social support and its sources, this review will focus on several sources of social support and the relationships involved, and the type of social support which might be communicated by/from each. Sources are broadly divided into three groupings: family ties, friendship ties, and a "catch-all" category identified as weak ties.

♦ Family Ties

Primary among the sources of social support are the members of one's family. While individuals can choose their friends, they are nearly always born into their families and it is in those families that "members have life-long involuntary ties and mutual obligations" (Eggert, 1987). While the family can be configured in a variety of forms (children with single mothers or fathers, children with both natural parents, children with a natural parent and a step-parent, children with adoptive parents, etc.), the primary function and a defining characteristic of family is the providing of emotional care for its members (Fitzpatrick & Badzinski, 1985).
Outlining the complexity of the family as a support system, Caplan (1982) writes that the family functions as a collector and disseminator of information about the world, feedback guidance system, source of ideology, guide and mediator in problem solving, source of practical service and concrete aid, haven for rest and recuperation, reference and control group, and source and validator of identity.

Drawing from the literature on the dimensions of support which come from families, Eggert (1987) suggests that the communication of social support from family members should be coded along two dimensions: expressive and informational/instrumental. She suggests that expressive messages would include "affectional, affirmational, or esteem enhancing communication" (p. 89). Informational/instrumental support includes "informational, guidance/problem-solving communication and interactional time" (p. 89). Thus, in an examination of the messages at-risks students receive from family members, one might expect that communication of social support would fall into these general types.

♦ Friendship Ties

Determining who is a friend and how friendship is conceptualized is difficult at best. While a variety of definitions exist (see House, 1981), Parks, Stan, and Eggert (1983) chose a pragmatic, if less rigorous, criterion for what constituted friendship. Rather than impose a priori a definition of "friend," they allowed subjects to use their individual criteria and simply label others as "friend," "close friend," and the like based on whatever subjective meaning those terms had. In other words, a "friend" or "close friend" was anyone who was thus labeled by a subject. Because the term is so ambiguous, the term friend will be defined in such a manner for this research.
Regardless of how "friendship" is defined, it is readily apparent that the social networks in which individuals find themselves are constituted by friends and intimates beyond the confines of family. Depending on the type of problem, it is to them that persons often first turn when in need of social support (Young, Giles, & Plantz, 1982).

After reviewing the literature on social support and friendship networks, Adelman, Parks, and Albrecht (1987) distilled four distinctive functions of friendship. They refer to them as the "four Rs" of friendship: referral, relief, reintegration, and reliance" (p. 124). Briefly, the referral function alludes to the fact that friends can be a source of information for friends in need. That is, friends may be close enough to the situation to suggest what might be done, but not close enough to be adversely affected by it. The relief function involves the providing of physical assistance, tangible support, or social outlet for feelings of pressure. Adelman et al. (1987) suggest that major life passages or crises may entail a kind of social reintegration. Friends are in a position to facilitate reentry to the social milieu from which their intimates may have been removed for a brief or extended period for any number of reasons (e.g. away in prison, extended stay in hospital, travelling abroad for a long period, etc.). Finally, the reliance function involves friends assisting the help seeker to maintain a sense of self-reliance or control by being alternatives to family support. Adelman et al. (1987) indicate that reliance on friends may be less damaging to perceptions of self than admitting to family members that help is needed.

♦ Weak Ties

Beyond family and friends lies a landscape filled with people who have the potential to provide social support but who are not tied to the center of the social support
network. Each of us has contact with a whole host of persons whom we encounter as we pass through our daily routines. And, although their impact on our lives is less pronounced, they do fulfill a number of functions for us.

In general, weak ties are people with whom individuals have low relational involvement with minimal obligation (Adelman, Parks, and Albrecht, 1987). Shumaker and Brownell (1984), because they see social support from an exchange perspective, purposefully "exclude network membership as a necessary dimension of the phenomenon" (p. 17). Included in the behaviors which might be considered supportive would be smiles or greetings from acquaintances or strangers, help from strangers when in obvious distress, as well as assistance when those with whom persons have closer ties cannot or will not be involved. Weak ties which are within the community but outside a person's normal circle of friends and family have been referred to by Caplan (1974) as "informal caregivers." These caregivers fall into two categories: generalists and specialists. Among the former, he lists drugstore or grocery workers, hairdressers, bartenders, police officers, and newspaper vendors. Informal caregivers, he writes, "are people who are widely recognized in their neighborhoods to have wisdom in matters of human relations or to be knowledgeable about the community caregiving system" (p. 12). Specialists, on the other hand, are persons who have experienced and overcome particular crises and are seen by those in the community as having "specialized" knowledge. These persons are not professionals, but rather persons who have decided that they have learned from their experiences and want to help others who may find themselves in similar situations (e.g. gone through a divorce, experienced a particular illness, etc.).
Beyond the "informal caregivers," other weak ties include those who have, as their professions, the function of social support. These "community gatekeepers" (Albrecht & Adelman, 1984) include teachers, physicians, public health persons, counselors, and the like. Perhaps even more distant are the mediated weak ties which take the form of crisis hotlines and radio call-in shows. Shumaker and Brownell (1984) suggest that these forums provide "the highly stressed caller with immediate feedback" (p. 18) and may provide support by "lending an ear" or referrals to services that they might need.

Finally, Adelman, Parks, & Albrecht (1987) suggest that weak ties serve particular functions for persons seeking support. Weak ties can perform one or more of the following: "(1) extending access to information, goods, and services, (2) promoting social comparison with dissimilar others, (3) facilitating low-risk discussions of high risk topics, and (4) fostering a sense of community" (p. 133).

Other Reasons

In a paper written for the Hispanic Dropout Project (HDP, 1996), UC-San Diego Sociology and Education Professor Hugh Mehan argues that many Hispanic students drop out because they realize that, no matter how hard they work, they will still be relegated to low-paying jobs or, worse, no jobs at all. These beliefs are translated into actions: Disaffected Hispanic students withdraw from academic pursuits, act up in class, ignore assignments and homework, cut classes, and eventually drop out.

The rebellious behavior, the low academic achievement, and the high dropout rate of Latino students have been attributed to students' lack of self-discipline, dullness,
laziness, or an inability to project themselves into the future. But studies of students' belief systems show the actual causes of their academic difficulties are quite different. Their unwillingness to participate comes from their assessment of the costs and benefits of "playing the game." They believe that the chances are too slim that schooling will propel them up the ladder of success to warrant the effort required. "Given this logic," Secada says, "their oppositional behavior is a form of resistance to an institution that cannot deliver on its promise of upward mobility for all students."

Secada has heard from Hispanic parents complaining about the aging and inadequate facilities where their children go to school. One parent noted, for instance, that the noise in her daughter's high school is unbearable because the school is old and overcrowded and there is nothing to dampen the noise. "Kids can't help but jostle and bump into each other while changing classes; the noise levels put everyone on edge; and of course, fights are going to break out," Secada says. "Kids who fight get suspended and, from there, it's not too far to dropping out." Another Latino parent, whose 13-year-old daughter had a baby, called Secada in desperation because she was being pushed out of school by teachers who were disciplining her for minor infractions that they would let other kids get away with.

Although many studies have tried to identify the causes of student dropout, they tend to focus attention on the individual student. Personal traits (self esteem, language proficiency, pregnancy), sociodemographic status (race, ethnicity, social class, gender), and other individual-level factors (need to get a job, personal dissatisfaction with school) have been associated with a student's decision to leave school. But Mehan argues that concern about dropouts should focus on contextual factors such as classroom processes,
tracking, and neighborhood-level forces that affect children, and how those factors influence their decisions to leave or to stay in school.

One significant contextual problem is the social organization of schooling with its unequal distribution of resources, including teachers, curriculum, and instruction. Furthermore, public schools are caught in the middle of competing agendas. On the one hand, Mehan points out, educators are expected to teach every student to the best of his or her abilities. On the other hand, educators are asked to provide an equitable education for all students. These are competing agendas that pit the norms of "individualism" and "the common good" against each other.

Ability tracking takes on a caste-like character that limits students' educational options and affects their futures, Mehan says. Once students are placed into low-ability groups, they seldom are promoted to high groups. And they're more likely to be placed in general and vocational tracks in high school, which can trap students, despite their good achievement.

Other researchers have outlined the following factors as contributors to the Hispanic students' high dropout rates:

♦ Issues of limited English proficiency

The ability to speak and read English, a problem which is not unique to the Hispanic population, is a concern for many. Spanish-speakers may have difficulty with English because they have had limited opportunities to use English. For example, Hispanic students may speak English only at school, while speaking Spanish at home and outside of school. Difficulties in speaking and reading English places students at risk for
academic failure. In fact, Hispanic students who speak Spanish are more likely to drop out of high school than peers who speak only English.

Between 1979 and 1989, the percentage of Spanish speakers age 5 and older increased 65 percent in the United States. In 1989, more than 14 million people in the United States spoke Spanish. Of those who spoke languages other than English, 58 percent spoke Spanish. Of these Spanish speakers, almost half reported having difficulty speaking English (U.S. Department of Education, 1993).

McMillan, Kaufman and Klein (1997), identify English language speaking ability as one of the prime contributor to the high Hispanic students' dropout rates. According to studies, those who reported speaking English "not well" had a 32.9% dropout rate, while those who spoke English well or very well had a 19.2% dropout rate.

Knowing the pervasiveness of this problem is important for understanding the differences that exist between Hispanics and other racial and ethnic groups in terms of educational participation, progress, and achievement.

♦ Background Factors

Several "background factors" have been identified as consistent predictors of dropping out: Socioeconomic class, time spent in the US, the presence of print, and family factors. Students in wealthier families drop out less, those who have been in the US longer and who live in a more print-rich environment drop out less, those who live with both parents, and whose parents monitor school work drop out less, and those who do not become teen parents drop out less (McMillan, Kaufman and Klein, 1997).

These background factors, researchers say, appear to be responsible for the difference in dropout rates among different ethnic groups. In other words, when
researchers control for these factors, there is no difference in dropout rates between Hispanics and other groups. This result holds for those who drop out between grades 8 and 10 (Rumberger, 1995) as well as for those who drop out later (Rumberger, 1983; White and Kaufman, 1997; Pirog and Magee, 1997).

- Family characteristics and parent's involvement in education

A child's family characteristics and home environment have implications for many aspects of a child's life, including academic experiences. Children who live in poverty, in single-parent homes, or whose parents have low levels of educational attainment are at greater risk for dropping out of high school, not achieving at higher levels, and not attending postsecondary institutions. As differences between whites and Hispanics in these family background characteristics change, the educational progress of Hispanics compared to whites can be expected to change. Both the likelihood of living in poverty and with a single parent increased among Hispanic children.

The number of Hispanic youth under age 18 living below 100 percent of the poverty line has increased from 33 percent in 1985 to 40 percent in 1996. In contrast, the percentage of white children living in poverty has decreased slightly from 12 percent in 1990 to 10 percent in 1996 (Federal Interagency Forum on Child and Family Statistics, America's Children: Key National Indicators of Well-Being, Washington, DC, 1998). The percentage of Hispanic 15- to 18-year-olds living with one parent increased from 23 percent in 1972 to 33 percent in 1997, while the percentage of whites in the same age range living with one parent increased from 12 to 22 percent.

Higher levels of parent education are generally associated with positive educational outcomes and experiences, such as participation in preprimary education and
not dropping out of high school. The parental education levels of Hispanic students ages 15 to 18 nearly doubled in the past 25 years. For example, in 1997, 45 percent of mothers and 46 percent of fathers of Hispanic 15- to 18-year olds had at least a high school diploma or GED, up from 24 percent of mothers and fathers in 1972. The increase for white students has been from 68 to 64 percent of mothers and fathers having a high school diploma or GED in 1972 to 92 and 90 percent, respectively, having these credentials in 1997.

Parents' involvement in their children's education is another way through which the family influences educational experiences. Parent participation in their children's education is evidenced by their involvement in school-related issues and activities. In 1996, parents of Hispanic children were equally or more involved in education-related activities that directly influenced their children than were parents of white children. For example, parents of Hispanics were as likely as parents of whites to attend general school meetings, and more likely to help their children with homework during the week than parents of white children. However, parents of Hispanic children were less likely than parents of white children to participate in school activities that did not directly influence their child's education, such as attending a school event, acting as a volunteer, or serving on a committee.

- Preprimary education

Research has shown that a quality preschool experience is an important indicator of student success. Preprimary education prepares children for school by teaching learning and socialization skills (Field, T., 1991 and Howes, C., 1988).

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The preprimary educational experiences of Hispanic children differ from those of whites. Hispanic 3- and 4-year-olds are less likely to participate in preprimary education than their white peers, and are less likely to participate in early literacy activities.

One form of preprimary education is an organized preprimary program, such as Head Start or pre-kindergarten. In 1996, about 22 percent of Hispanic 3-year-olds were enrolled in such preprimary programs compared to 40 percent of whites. Among 4-year-olds, 45 percent of Hispanics and 59 percent of whites were enrolled. Among 5-year-olds of normal kindergarten age, these differences largely disappeared: Hispanic enrollment rates, including kindergarten enrollment, were similar to the enrollment rates of white 5-year-olds.

Preprimary educational opportunities are fostered in the home environment as well as in preprimary programs. In 1996, Hispanic children, ages 3-5, were less likely to have been read to in the past week or to have visited a library in the past month than white children. This lack of early reading experience can create learning deficits for Hispanic youngsters (Espinosa, Linda M., 1995).

- Progress in school

In the past Hispanic students have been commonly "tracked" into general high school courses that satisfied only the most basic requirements for earning a high school diploma, but did not prepare students to attend 4-year colleges or rigorous technical schools. This general high school curriculum also did not prepare students for good entry-level jobs in high-technology industries if the student chooses not to pursue a postsecondary education (President's Advisory Commission, 1996).
♦ Reading Skills

Hispanic students score lower than white students in national assessments of reading, writing, mathematics, and science proficiency. Developing reading skills at an early stage is important to future educational success. Once behind in reading proficiency, a student risks having difficulty with other aspects of the curriculum, and a continued lag behind other peers in reading skills as the student gets older. In 1996, at age 9, Hispanic students had an average reading scale score of 194 while white students had an average score of 220.

There is evidence that the majority of reading skills are mastered by age 13, which is generally when reading is taught in school as an explicit subject for the most part (U.S. Department of Education, 1997).

On average, the reading scores of all 13-year-old students in 1996 were about 50 points higher than their reading scores as 9-year-olds in 1992. In 1996, Hispanic reading scores differed by 46 points between ages 9 and 13, compared to 25 points between ages 13 and 17. The Hispanic-white differences in reading scores were about the same at all three age levels: 26 points at age 9, 27 points at age 13, and 30 points at age 17. At age 17, Hispanic students were reading at levels similar to white 13-year-olds.

These scoring differences between Hispanics and whites mean that the average Hispanic score is below that of the average student by about 25 to 30 points. The extent to which these large differences may be attributable to recent immigration or language difficulties is unknown. Also, students whose English proficiency is judged not to be appropriate for the NAEP tests are excluded from taking them (U.S. Department of Education, 1997).
Foreign Born

Foreign-born Hispanic students are at a much greater risk of not completing high school than native-born students. The status dropout rate (defined as a proportion of young adults ages 16–24 who are not enrolled in school and do not have a high school credential) is about two times higher for Hispanic migrants than for Hispanic young adults born in the 50 states and DC (46 versus 18 percent). Many Hispanic youths migrating to the U.S. do not enroll in school, but seek employment instead. They may be deterred from enrolling by language, economic, and cultural differences (U.S. Department of Education, 1997). Those who never enroll in high school may account for about one-half of the higher dropout rate for Hispanics. In contrast, Hispanics who had ever enrolled in U.S. schools had a status dropout rate of 20 percent (U.S. Department of Education, 1997).

The likelihood of not completing high school is also related to language use in the home and English-language proficiency. In 1995, for example, the status dropout rate for Hispanics speaking Spanish at home, who were ever enrolled in U.S. schools, and who spoke English "well," was 19 percent compared to 33 percent for their peers who did not speak English "well." (U.S. Department of Education, 1997).

Due to immigration and the higher dropout rates for Hispanics born in the United States, the overall percentage of the Hispanic, young adult population, ages 25–29 who have completed high school through receiving a diploma or other certificate of high school equivalency is less than that of whites. These rates are 93 percent for whites and 62 percent for Hispanics in 1997. The high school completion rate for Hispanics shows
no consistent trend since the early 1980s, while the high school completion rate for whites has increased.

In one paper written for the Hispanic Dropout Project (HDP), it has been argued that many Hispanic youth drop out because they realize that, no matter how hard they work, they will still get funneled into low-paying jobs, or even no jobs at all. These beliefs become such actions as: withdrawing from academic pursuits, acting up in class, ignoring assignments and homework, cutting class, and eventually dropping out. These behaviors have been attributed to students' lack of self-discipline, dullness, laziness, or an inability to project themselves into the future. However, studies of these students' beliefs show that their unwillingness to participate comes from their assessment of the costs and benefits of "playing the game." That is, they think that their chances are too low that school will propel them to success to make the effort worthwhile (HDP, 1996).

**Structural Characteristic**

Rumberger (1995), for example, concluded: "Changes in the predicted odds of dropping out associated with demographic variables become insignificant after controlling for other factors. For example, Black, Hispanic, and Native American students have twice the odds of dropping out compared to White students ... however, after controlling for the structural characteristics of family background - particularly, socioeconomic status - the predicted odds of dropping out are no different than those for White students" (p. 605).

Hispanic students are well behind majority children in these areas. Approximately 40% of Hispanic children live in poverty, compared to 15% of white non-Hispanic children, and 45% live with parents who have completed high school, compared to 81%
of non Hispanic white children. Only 68% live with both parents, compared to 81% of non Hispanic white children (Rumberger, 1991).

White and Kaufman (1997), in their study of high school dropouts between 1980 and 1986 provide a clear example of the impact of these factors. According to them, the following are the Probabilities of dropping out of high school: impact of SES, social capital, generation:

- White - low SES, low social capital = .23
- Black - low SES, low social capital = .22
- White - high SES, high social capital = .08
- Black - high SES, high social capital = .08
- Mexican - immigrant, less than 6 years in US, low SES, low social capital = .40
- Mexican - immigrant, more than 6 years, high SES, high social capital = .12
- Mexican - second generation or native, high SES, high social capital = .10
- Asian - immigrant, less than 6 years in US, low SES, low social capital = .31
- Asian - immigrant, more than 6 years in US, high SES, high social capital = .08
- Asian - second generation or native, high SES, high social capital = .07


Note that Hispanic lower social class, new immigrants without family factors working in their favor have a high probability of dropping out, but when factors are more favorable, there is no significant difference in the probability of dropping out among the groups.
Additional evidence that there is strong economic pressure on many Hispanic students comes from Rumberger (1983), who listed the reasons students gave for dropping out. Only 4% of Hispanic male dropouts said that the reason was "poor performance" in school (compared to 8% of male non-Hispanic white students). On the other hand, 38% of the Hispanic students gave economic reasons (desire to work, financial difficulties, home responsibilities), compared to 22% of the non-Hispanic white students. Similar tendencies were present for female dropouts.

The Costs of Dropping Out

The imperative to conduct research on dropout students is driven by the impact our ignorance has had on the well being of our society and the individuals who seem to fall through the cracks in the system. Those who fail to complete high school, even by age 24, are at an enormous disadvantage in the labor force. Unemployment rates among male high school dropouts are much higher than those for high school graduates. Among male dropouts in October 1988, the most current year for which statistics are available, the unemployment rate was nearly 20 percent; for high school graduates with no college education, the unemployment rate was slightly below 10 percent. (Statistical Abstract of the U.S. 1990, Table 250.) As the job market requires greater skills, many dropouts may find themselves completely locked out of an increasing variety of jobs as employers begin demanding a high school diploma as the minimum job qualification.

Typically, most male dropouts find jobs as machine operators, common laborers, and as maintenance and repair personnel. This sector of the labor force is unstable and prone to market fluctuations that can constrict job opportunities or lead to layoffs at a
greater rate than other sectors of the economy. Housing and building construction, one of the most common areas of employment for male dropouts, is greatly affected by seasonal and economic fluctuations.

Many dropouts correctly conclude that their employment opportunities are limited and they then complete their education. As the job market becomes increasingly selective, dropouts, as well as high school graduates who lack basic skills, will be forced to supplement incomplete or inadequate education. There are a number of ways to assess the cost of dropping out of school. The most obvious may be the societal implications that include greater unemployment, added social service costs, as well as increases in crime. But less well understood and researched are the individual costs associated with leaving school without graduating. This section will address both costs.

Impact on Employment

The character of the work force has changed dramatically over the last two decades and the need for skilled workers consequently has increased. Thus, it is hardly surprising that young men and women who leave school before graduating and acquiring basic skills will suffer greater unemployment rates than young men and women who do complete high school.

Young women who dropped out of school were reported as having an overall labor force participation rate in 1986 of 46.1% but for those who graduated, it was 77.4% (Markey, 1988). Race and ethnicity impact participation as well. The participation rated the same year for Anglo female dropouts was 47.7%, for African-American female dropouts 37.9%, and for Hispanic female dropouts 35.1%. If those young women had children of their own, the employment rates dropped to 35.6% for Anglo females, 35.5%
for African-American females, and 21.2% for Hispanic females. In general, graduates with children of their own had a 60% participation rate.

For young male high school dropouts, the picture is also bleak. In 1986, of those between the ages of 16 and 24, "more than 1 of 5 dropouts were unemployed compared to 1 of 10 high school graduates. Among the dropouts, the jobless rate for African-Americans (44%) was much higher than for Anglos (18%) and Hispanics (15%)"
(Markey, 1988, p. 40).

Costs to Society

As a consequence of the high dropout rates and subsequent unemployment or underemployment, the decreased earning power of those who leave early is substantial. Its impact on social welfare services is equally so. More than 15 years ago, Jones (1977), citing the Select Senate Committee on Equal Educational Opportunity, showed that the nation's direct cost for 24- to 34-year old male dropouts for 1969 was $71 billion in lost tax revenues and $237 billion in purchasing power for those men. The Select Committee further estimated that $3 billion could be added to that figure for welfare expenditures.

In the most recent and comprehensive study that analyzed the cost of students leaving school early in Texas, the Intercultural Development Research Association (IDRA) projected that the total earnings and tax losses to the state of Texas due to projected attrition rates among 1982-1983 ninth graders was nearly $16.9 billion (IDRA, 1986). They estimated that "45,344 males and 40,656 females would drop out of school, that their lifetime earnings (adjusted for differences between expected income for graduates and those for dropouts) would be $241,630 for males and $146,072 for
females, and that this would result in a loss of earnings of nearly $17 billion (including
$5.068 billion in lost tax revenues)” (IDRA, 1986, p. 29).

The costs to the state of Texas for social welfare services, unemployment, crime
and incarceration, and educating those dropouts who had left school early were also
calculated. Due to the conservative methodology they used to arrive at their cost figures,
the IDRA believes that it is very likely that the cost to Texas is underestimated.

Nevertheless, the increased burden to the state for only two social welfare
programs (Aid to Families with Dependent Children and Food Stamps) was estimated at
$253.7 million a year. The cost associated with increased unemployment (job placement
services, unemployment compensation) was estimated at $17.6 million annually. With
regard to costs associated with crime and incarceration, IDRA gauged that the state of
Texas increased expenditures approximately $367.77 million. Finally, the cost of training
and adult education was set at $12.9 million per annum. Therefore, the total possible
savings associated with keeping students in school was calculated to be approximately
$652 million per year in Texas alone!

Finally, to demonstrate the difference between the cost of keeping children in
school and the costs associated with them dropping out, IDRA figured that in order to
educate those potential dropouts and provide programs which would prevent them from
doing so, it would cost the state of Texas nearly $2 billion per cadre (one class as it
moves through grade levels). When compared to just the lost wages and tax revenues of
nearly $17 billion, the result is an almost 9 to 1 ratio. That is, for every dollar spent on
education and the prevention of dropouts, the return would be nine dollars.
These comprehensive figures represent a cost-benefit analysis for only one state. If those calculations can be generalized to the remainder of the country, (Texas dropouts represent nearly 10% of the national dropout figure) then the cost to the nation (in terms of the social services mentioned above) would exceed $6.5 billion dollars a year. The loss of earnings and tax revenues over the lifetime of a single cadre would be over $170 billion.

Costs to Individuals

Assessing the price exacted on the individual dropout is hard to determine with any precision. It is clear though, from the foregoing, that higher unemployment and underemployment rates relegate most early school leavers to lower social status, to lower standards of living, and to the host of problems and negative effects associated with residing at the bottom of the socio-economic ladder.

The deficits reported in the literature are many and they bode ill for those who drop out. For instance, although the connection between dropping out and criminal behavior is tenuous, the high representation of dropouts among those in prison suggests that dropouts are individuals who may have seen too few options available to them and so find themselves in circumstances which promote criminal behavior (IDRA, 1989). Rumberger (1987) also noted that dropouts often suffer from more health and dental problems, increases in total mortality and suicides, and are admitted in greater numbers to mental hospitals. For too many dropouts, school is seen as the place where they have encountered failure after failure (for a variety of reasons) resulting in lower self-esteem (Bickel & Papagiannis, 1988; Catterall, 1987) and leading to what can only be seen as a rational decision to leave a punishing environment. If students believe, and many do, that
staying in school will not increase their chances for better work (Ogbu, 1981, 1974), and that the school environment, with all its barriers and deficiencies, causes them such pain, then it is a logical conclusion that dropping out is right for them (Williams, 1987).

Finally, Mann (1986) provides a cost perspective that helps establish the urgency of the entire enterprise. Instead of looking at the billions of dollars lost or the psychological problems that are engendered when students drop out of school, Mann writes about smaller but perhaps equally meaningful numbers:

The clock that measures our efforts is calibrated with young people. Fifteen percent is a conservative estimate of the dropout rate for a city school system. In middle-sized cities - Boston, St. Louis, San Francisco - that means about 20 dropouts each week. If you are charged to "do something" about that you might begin with a survey of existing practices, which could take a month (and 80 students); a needs assessment will take two more months to circulate and analyze (160 more students); writing a program and getting board approval could be three months (and 240 more young people gone). That is 480 dropouts before anything different and maybe better is even tried. (p. 321).

If 480 dropouts in six months for a single school system seems insignificant, one need only recognize that there are thousands of school systems across the nation, each battling the same issues and under the same pressures to "do something." The 480 dropouts for a single middle-sized school system translated into about 700,000 dropouts a year (Markey, 1988) or an average of 3,789 students per school day nationwide.
Because the numbers are so large and the costs associated so profound, researchers have sought to understand the reasons why students drop out of school. Their efforts have resulted in an interesting array of characteristics and determinants for why students leave school prematurely. The following section will summarize the reasons that have been most widely reported in the dropout and at-risk literature. Missing from this summary are explicit references to communication issues that are likely to be associated with dropping out of school. Those communication issues are addressed later in the chapter.

**Dropping In**

Contrary to some predictions, dropping out of high school is not a permanent condition that leads to a lifetime of poverty and dependence. Nearly one-half of the 2,132 dropouts in the High School & Beyond survey had dropped back in, returning to complete their education within four years of their expected graduation date. Many do not return to the traditional school setting but pursue an equivalency degree. According to the National Center for Education Statistics survey, Dropouts in the United States: 1988, "dropping out is not so much an event that occurs at a specific point in time, but a process representing a gradual disengagement from school over time," (Bruno V. Manno and Kirk Winters, 1990). Like dropping out, returning to school for many is a gradual process.

Among the 1980 sophomore dropout cohort tracked in the HS&B survey, 46.5 percent had completed high school or received an equivalent degree within four years of their expected graduation date of June, 1982; another 12 percent were pursuing that goal.
Those with characteristics of lower dropout rates, such as higher socioeconomic status and English language backgrounds, were more likely to return and complete their education.

Within four years of their expected graduation, about one-third of the returning HS&B dropouts completed their education by earning a high school diploma, while the other two-thirds received some form of equivalency. Administered by the American Council on Education in Washington, D.C., the Test of General Educational Development tests for proficiency in five subject areas: mathematics, reading skills, science, social studies, and writing skills. Studies indicate that GED recipients have greater labor force participation rates and earn more than do those high school dropouts with no educational credentials; the GED recipients, however, have higher unemployment rates and earn less on average than high school graduates (David L. Passmore, 1987). A 1986 study in the Denver Metropolitan Area found that 83 percent of employers would consider hiring equally GED holders and high school graduates and that only 16 percent preferred a high school graduate over a GED recipient (Betty W. Carson, 1986). These studies indicate that as use of the GED has risen, acceptance by employers has followed. For many dropouts, the GED is a valuable "second chance" to complete their education and offers them opportunities in the labor force not available to dropouts who never return.

National Education Goal 2000

The National Education Goal 2000 is an educational landmark event that happened in September 1989 when the then President, George Bush and the nation's
Governors met in Charlottesville, Virginia, for an unprecedented, bipartisan "Education Summit." At that summit, they laid the groundwork for the National Education Goals - a vision of the education results toward which we should strive, as well as developed a timetable for attaining the Goals. These Goals are a rallying cry that focus attention on where we stand, how far we have come, and how far we have to go to guarantee world-class education for all. On January 25, 1994, the One Hundred Third Congress of the United States of America enacted GOALS 2000: EDUCATE AMERICA ACT. One of the key goals (Goal 2) states that by the year 2000, "The high school graduation rate will increase to at least 90 percent." The Congress declares the National Education Goals as follow:

1) School Readiness

(A) By the year 2000, all children in America will start school ready to learn.

(B) The objectives for this goal are that:

   (i) All children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school;

   (ii) Every parent in the United States will be a child's first teacher and devote time each day to helping such parent's preschool child learn, and parents will have access to the training and support parents need; and

   (iii) Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain the mental alertness necessary to be prepared to learn, and the
number of low-birth weight babies will be significantly reduced through
enhanced prenatal health systems.

(2) School Completion

(A) By the year 2000, the high school graduation rate will increase to at least 90
percent.

(B) The objectives for this goal are that:

(i) The Nation must dramatically reduce its school dropout rate, and 75
percent of the students who do drop out will successfully complete a high
school degree or its equivalent; and

(ii) The gap in high school graduation rates between American students
from minority backgrounds and their non-minority counterparts will be
eliminated.

(3) Student Achievement and Citizenship

(A) By the year 2000, all students will leave grades 4, 8, and 12 having
demonstrated competency over challenging subject matter including English,
mathematics, science, foreign languages, civics and government, economics, arts,
history, and geography, and every school in America will ensure that all students
learn to use their minds well, so they may be prepared for responsible citizenship,
further learning, and productive employment in our Nation's modern economy.
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UMI
acquire the knowledge and skills needed to instruct and prepare all American
students for the next century.

(B) The objectives for this goal are that:

(i) All teachers will have access to pre-service teacher education and
continuing professional development activities that will provide such
teachers with the knowledge and skills needed to teach to an increasingly
diverse student population with a variety of educational, social, and health
needs;

(ii) All teachers will have continuing opportunities to acquire additional
knowledge and skills needed to teach challenging subject matter and to
use emerging new methods, forms of assessment, and technologies;

(iii) States and school districts will create integrated strategies to attract,
recruit, prepare, retrain, and support the continued professional
development of teachers, administrators, and other educators, so that there
is a highly talented work force of professional educators to teach
challenging subject matter; and

(iv) Partnerships will be established, whenever possible, among local
educational agencies, institutions of higher education, parents, and local
labor, business, and professional associations to provide and support
programs for the professional development of educators.
(5) Mathematics and Science

(A) By the year 2000, United States students will be first in the world in mathematics and science achievement.

(B) The objectives for this goal are that:

(i) Mathematics and science education, including the metric system of measurement, will be strengthened throughout the system, especially in the early grades;

(ii) The number of teachers with a substantive background in mathematics and science, including the metric system of measurement, will increase by 50 percent; and

(iii) The number of United States undergraduate and graduate students, especially women and minorities, who complete degrees in mathematics, science, and engineering will increase significantly.

(6) Adult Literacy and Lifelong Learning

(A) By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

(B) The objectives for this goal are that:

(i) Every major American business will be involved in strengthening the connection between education and work;
(ii) All workers will have the opportunity to acquire the knowledge and skills, from basic to highly technical, needed to adapt to emerging new technologies, work methods, and markets through public and private educational, vocational, technical, workplace, or other programs;

(iii) The number of quality programs, including those at libraries, that are designed to serve more effectively the needs of the growing number of part-time and mid-career students will increase substantially;

(iv) The proportion of the qualified students, especially minorities, who enter college, who complete at least two years, and who complete their degree programs will increase substantially;

(v) The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially; and

(vi) Schools, in implementing comprehensive parent involvement programs, will offer more adult literacy, parent training and life-long learning opportunities to improve the ties between home and school, and enhance parents' work and home lives.

(7) Safe, Disciplined, And Alcohol- and Drug-Free Schools

(A) By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
(B) The objectives for this goal are that:

(i) Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol;

(ii) Parents, businesses, governmental and community organizations will work together to ensure the rights of students to study in a safe and secure environment that is free of drugs and crime, and that schools provide a healthy environment and are a safe haven for all children;

(iii) Every local educational agency will develop and implement a policy to ensure that all schools are free of violence and the unauthorized presence of weapons;

(iv) Every local educational agency will develop a sequential, comprehensive kindergarten through twelfth grade drug and alcohol prevention education program;

(v) Drug and alcohol curriculum should be taught as an integral part of sequential, comprehensive health education;

(vi) Community-based teams should be organized to provide students and teachers with needed support; and

(vii) Every school should work to eliminate sexual harassment.
(8) Parental Participation

(A) By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

(B) The objectives for this Goal are that:

(i) Every State will develop policies to assist local schools and local educational agencies to establish programs for increasing partnerships that respond to the varying needs of parents and the home, including parents of children who are disadvantaged or bilingual, or parents of children with disabilities;

(ii) Every school will actively engage parents and families in a partnership which supports the academic work of children at home and shared educational decision-making at school; and

(iii) Parents and families will help to ensure that schools are adequately supported and will hold schools and teachers to high standards of accountability.

The Hispanic Dropout Project (HDP)

In response to a request by New Mexico Senator Jeff Bingaman, Chair of the U.S. Senate Task Force on Hispanic Issues and member of the National Education Goals Panel, U.S. Secretary of Education Richard Riley appointed a seven-member Hispanic
Dropout Project (HDP) panel in September 1995; Riley named UW-Madison Education Professor Walter Secada project director.

The HDP is funded by the U.S. Department of Education's Office of the Under Secretary and Office of Bilingual Education and Minority Languages Affairs (OBEMLA), and staffed from those two offices. Secada says the project's threefold mission is to call attention to the nature and scope of Hispanic dropout, to produce concrete analyses of the issues and syntheses of the extant research on interventions, and to recommend actions that can be taken at federal, state, and local levels to reduce the dropout rate of Hispanic youth. To achieve these goals, the project has commissioned a series of four technical literature reviews and five non-technical papers for general audiences. In an effort to involve key stakeholder groups and interested members of the public, and to gather widespread input on matters involving Hispanic dropout, the HDP is conducting local site meetings to gather information and to test the validity of its findings. Through a series of site visits, project members are studying dropout reduction programs that are working. They're identifying practical strategies that meet the needs of Hispanic students and that increase achievement and school completion.

The findings of the Hispanic Dropout Project was delivered to Secretary Riley in Autumn 1996, after team members visited schools and prevention projects and met with stakeholder groups and the press. Sites include San Antonio, Houston, San Diego, Los Angeles, Calexico, Miami, New York City, Albuquerque, Las Cruces, Chicago, and Toledo. In addition to Secada, HDP members include UCLA Education Professor Jeannie Oakes, Johns Hopkins Sociology Professor Robert Slavin, New Mexico State University Education Professor Rudolfo Chavez-Chavez, Eugenio Maria de Hostos Community-
College President Isaura Santiago-Santiago, UC-Berkeley Education Dean Eugene Garcia, and William Howard Taft High School Science Department Chair Cipriano Munoz (HDP, 1996)

The HDP project's Data Book illustrates the dimensions of the problem of Hispanic dropout, its antecedents, and its consequences. According to the Data Book, social and economic costs are escalating for many reasons:

1. Both in absolute numbers and as a proportion of our nation's students, the Hispanic population is rapidly growing.
2. In tomorrow's workplace fewer and fewer dropouts will find employment.
3. Upgraded workforce skills are vital for an individual's and the nation's success in the evolving world economy.
4. To participate meaningfully in a democratic society, to vote intelligently, and to make intelligent consumer choices, people need to possess increasingly more sophisticated knowledge and skills.
5. As the number of America's senior citizens grows, labor force productivity and income must expand to help meet the needs of senior citizens.
6. Tomorrow's children will be powerfully affected by their parents' income and education levels.

Relationship Between Education and Labor Market

Attaining high school diploma has an edge over a high school dropout because it increases one's employment opportunities by enhancing knowledge, ability to learn, work-related skills, and job readiness. Successful employment leads to better overall
opportunities for young adults by giving them the opportunity to gain valuable work experience and on-the-job training (Zemsky, Robert, 1997; Alan Lesgold, Michael J. Feuer, and Allison Black, 1997).

Among both high school completers not enrolled in college and high school dropouts, Hispanics are less likely to be employed than their white peers. For example, 1995, 71 percent of white high school graduates not enrolled in college and 43 percent of Hispanic high school graduates were employed. Among school dropouts, 52 percent of whites and 44 percent of Hispanics were employed (Zemsky, Robert, 1997; Alan Lesgold, Michael J. Feuer, and Allison Black, 1997).

Identifying and Assisting "At-Risk" Students

Chester E. Finn, Jr., a former undersecretary at the U.S. Department of Education and now Professor of Education at Vanderbilt University, explains that many educators incorrectly blame education standards for driving out students who, they say, are frustrated by their failure to meet high educational expectations. The experience of many schools confirm's Finn's conclusion that the dropout problem cannot be blamed on high standards. Parochial schools, which are usually regarded as having higher academic standards than most public schools, have much lower dropout rates.

Many educators ignore this evidence and dilute the curriculum in the hopes of keeping students in the classroom. This compounds the problem. A 1988 University of Pittsburgh study by professors of Special Education Sandra E. Miller, Gaca Leinhardt, and Naomi Zigmond concludes that "... accommodation, although it may keep students in school, may not only limit adolescents' acquisition of formal knowledge, but may also be
a poor model for preparing adolescents for the world beyond school," (Miller, Leinhardt, and Zigmond, 1988). The study compares the high school learning-experiences of learning-disabled and non-learning-disabled students in a blue-collar community of 24,000 people. Learning disabled students were characterized by poor academic performance, difficulties in social interactions with peers, and low self-esteem. All of the students had low skill levels and the demands placed upon them by the school were extremely low. Tracking the students through an academic year, the study finds that the school sought to "accommodate" the students in three ways: Teachers did not select challenging academic material for any of the students; teachers did not grade homework assignments for accuracy, but gave credit for simply turning something in; and students with truancy problems were able to "buy back" unexcused absences and clear their records.

The study concludes that reducing the dropout rate through a non-competitive curriculum limits the value of every student's education. While retaining students through graduation is desirable, says the study, the primary goal of education is to provide them with "educationally worthwhile experiences while they are there." (p. 485)

Similar conclusion on the benefits of rigorous academic tracking have been drawn by University of Chicago Professor of Sociology and Education James Coleman and by Brookings scholars Chubb and Moe.

Lowering the quality of education hurts other students in the learning environment without sufficiently assisting potential dropouts. Says former Duvall County, Florida, Superintendent of Public Instruction Herb A. Sang: "...When we enacted rigorous promotional policies, student achievement improved. Some people
anticipated that higher standards would lead to a higher dropout rate. But this hasn't happened," (OERI, 1987).

Ignoring the wealth of evidence that diluting standards fails to address the dropout problem, the National Education Association's 1986 Blueprint for Success calls for non-competitive instruction and cooperative group learning as an effective strategy to reduce the dropout rate. Forcing students who have little or no interest in learning to stay in an academic environment not only disrupts the learning of other students but could increase drug-related crime and violence in the halls and classrooms of American public high schools.

Some Federal Dropout Prevention Initiatives

The federal government has already made substantial contributions to the development of evidence about dropouts and their characteristics. In the U.S. Department of Education, the National Center for Education Statistics (NCES) publishes an annual report on the status of dropouts in the nation, and data from NCES longitudinal surveys provide the foundation for descriptive and analytic research on the topic. The results of studies using these data have helped shape our understanding of the school dropout problem, and guided the development of strategies for keeping students in school. Moreover, the promulgation of successful programs through the National Diffusion Network in the Department's Office of Educational Research and Improvement provides access to promising, if not proven, dropout prevention programs to the nation's schools.
Some State Dropout Prevention Initiatives

Some dropout prevention programs appear to be succeeding. Examples: Minnesota. In addition to its now famous "open enrollment" choice option, by which students may attend schools outside their resident district, Minnesota's 1985 law includes programs for high school dropouts and potential dropouts. The Post Secondary Options program, for example, offers specific incentives for students who exhibit such "at risk" characteristics as low test scores or grades, drug or alcohol addictions, excessive truancy records, teen pregnancy, and expulsion. Such incentives include earning college credit for courses not offered in the traditional high school curriculum, the ability to transfer out of an unsatisfactory school, and reimbursement of tutorial and transportation costs. The Post Secondary Options program, when college courses are taken for high school credit, also allows public school students in the eleventh and twelfth grades to enroll full- or part-time in courses at universities, colleges, and vocational institutions. Of the 5,700 students who took part in the program's first year, 6 percent were returning high school dropouts. Another program, the High School Graduation Incentives, allows students to attend a school outside their resident district if the receiving district has room and the move would not negatively affect desegregation. In 1987, the program's first year, 1,500 students enrolled in it. More than half of these were re-enrolled dropouts.

Washington State. Educational Clinics, Inc. (ECI) of Seattle, a private school, prepares its students to re-enter high school or to pass the GED and find employment. The state-funded program, begun in 1977, places students in five skill levels where class sizes average approximately 15 and where the students progress at their own speed. Students entering the program with severe learning deficiencies (skills below the fifth
grade level), attend special tutorial classes. Students in the ECI program must adhere to a
code of ethics demanding courtesy, responsibility, and honesty. Washington State saves
money overall from ECI. According to surveys conducted 30 months after a student
leaves the program, the participants are 70 percent less likely to be jailed and 50 percent
less likely to be receiving welfare than before entering the program (Miller, 1982).
Similar success was found with respect to employment. Prior to the ECI program, only 16
percent of the students were employed either full- or part-time; 30 months after leaving
the program, the employment rate for ECI students was 64.3 percent. Reductions in
welfare dependency and increased tax revenues have made the program cost effective,
with a 110.9 percent annual rate of payback on the initial cost to the state.

West Virginia, one of the more controversial dropout-prevention approaches is
West Virginia's No School/No Drive program. In 1988, the West Virginia legislature
granted its Department of Motor Vehicles authority to revoke driver's licenses of 16- to
18-year-olds who accumulate ten consecutive unexcused school absences or miss more
than fifteen unexcused days in a semester. Before a revoked license is returned, students
must pay a $15 fee and reduce the number of unexcused school absences during a
probationary period of between four weeks and an entire semester. Licenses are returned
at the completion of the probationary period. Between September 1988, when the
program began, and January, 1,003 licenses had been revoked. The number of high-
school-age dropouts in the state fell from approximately 5,000 in 1988 to 3,400 in 1989.
Critics of the program dispute the value of forcing school attendance on those who have
little desire to learn, and similar proposals have languished in state legislatures around the
country.
Wisconsin, one of the most innovative state welfare/education reform programs of the 1980s, Learnfare was initiated by Republican Governor Tommy Thompson of Wisconsin during the 1988-1989 school year. Since then other states have expressed interest in it. The program operates under a waiver from the U.S. Department of Health and Human Services and requires all teenagers between ages thirteen and nineteen who receive an Aid to Families with Dependant Children (AFDC) grant to be enrolled in school and comply with attendance requirements. The families of students who fail to meet the attendance guidelines or who drop out of school are subject to a reduction in monthly AFDC benefits until compliance is documented or a "good-cause" exemption is granted. The program attempts to link education attainment to breaking the cycle of welfare dependency. Thompson has been granted an extension of the Learnfare waiver to cover children between the ages of six and twelve in AFDC families to address dropout prevention at the elementary level, where most education analysts believe problems begin.

The Hispanic Dropout Project (HDP, 1996) has found some signs of success with dropout prevention programs. Retention efforts for junior high and high school students use out-of-school efforts such as tutoring, mentoring, career advising, and arranging for older students (who might otherwise drop-out) to work with younger ones. Other in-school efforts include school restructuring and eliminating ability tracking. Elementary schools have focused on increased academic achievement for Hispanics.
Some Emerging Dropout Intervention Programs

Several studies have shown that even though dropout rates have declined overall in recent years, especially among Blacks and Whites, the trend for Hispanic students is quite the opposite. According to the Census Bureau, in 1992 roughly 50% of Hispanics ages 16 to 24 dropped out of high school, up from 30% in 1990 (GAO, 1994). The increase in dropout rates among Hispanic high school students is cause for growing concern because by the year 2010, Hispanics are expected to be the largest minority group in the United States, making up 21% of the population (OERI, 1993).

Various dropout prevention programs have emerged such as: Coca-Cola Valued Youth program, Project Adelante, and California Partnership Academies. These three programs are for middle and high school students at risk of dropping out of school. The first two programs are specifically geared toward limited-English-proficient Hispanic youth. The third, a vocational program, involves the Hispanic students as well as the African-American students.

Coca-Cola Valued Youth Program

Developed by the Intercultural Development Research Association in Texas, Coca-Cola Valued Youth Programs (VYP) have been implemented in 60 schools in 8 states. The goals are to help Hispanic middle and high school students achieve academic success and improve their language skills. Other goals are to strengthen students' perceptions of themselves and school and to form school-home-community partnerships to increase the level of support for these students (Cardenas, Montecel, Supik, & Harris, 1992).

Middle and high school students are paired as tutors with elementary school students identified as being at risk of dropping out of school. Tutors are paid minimum
wage for their work. The program's philosophy is that the tutors, by being placed in paid positions of responsibility and treated as adults, will improve their self-esteem and academic performance. As one tutor claimed, "When I'm helping these kids, I'm helping myself. I'm learning things when I'm tutoring them" (Claiborne, 1994). In turn, the student being tutored will grow both academically and personally under the attention of the tutor and will be encouraged to remain in school until graduation.

Cross-age tutoring, the main component of the VYP, takes place at the elementary school one hour a day, four days a week; on the fifth day, the tutors take a class on effective tutoring strategies (Robledo & Rivera, 1990). In addition to conducting the tutoring sessions, tutors must adhere to the employee guidelines of their host school and report to a teacher coordinator, who monitors and evaluates their progress. Student tutors also attend classes in English as a second language and content areas.

Field trips, conducted at least twice a year, are designed to broaden students' horizons by exposing them to cultural and professional possibilities in their communities. A student recognition component serves to instill a sense of self-worth in both tutors and tutees. This takes the form of a celebratory lunch or dinner, media attention, or presentation of merit awards for student efforts to stay in school and help others do the same. Finally, adults who are successful in their field, have the same language and cultural background as the students, and have overcome similar obstacles act as role models and provide guidance to both the tutors and the tutees.

Project Adelante

Project Adelante, established in 1988 at Kean College, NJ, is currently implemented in three New Jersey school districts. The project's goals are to improve the
high school graduation rate of Hispanic students (especially those still learning English),
increase their opportunities for college admission, and increase the number who enter the
teaching profession (CAL, 1994).

Hispanic middle and high school students receive academic instruction, career
and personal counseling, peer tutoring, and mentoring by Hispanic professionals. This
takes place on the Kean College campus during an intensive five-week Summer
Academy and at Saturday Academies during the academic year. Students usually enter
the program in middle school and are encouraged to remain with it until they complete
high school.

Academic courses include English as a second language, science, and math. Class
size is kept at around 15 students. Teachers are free to design courses that are interesting
and appropriate for the students, to use both English and Spanish in the classroom and in
social settings, and to adjust their class schedules as needed to accommodate special
projects or field trips.

Personal and career counseling are key aspects of the program. Program
counselors, like teachers, come from participating schools and participate in all events, so
they know the students well. Students meet regularly with their counselors in one-on-one
and small-group settings and take a full course taught by a counselor, which covers social
and academic issues. The counselors also sponsor daytime and evening sessions for the
parents to come to the campus and discuss issues selected by the parents.

Peer tutoring furthers Adelante's goal of encouraging students to enter the
teaching profession. Tutors are Hispanic and African-American high school juniors and
seniors and Kean College freshmen and sophomores, many of whom are former Adelante
students. Each tutor is assigned a small group of students to meet with, work with in
class, and interact with in written dialogue journals. The tutors serve as role models. At
the same time, tutors receive intensive and ongoing training. They learn the tasks and
responsibilities of teaching and are often inspired to pursue teaching careers.

The mentoring program involves collaboration with HISPA, a service
organization for Hispanic employees at AT&T committed to promoting the education of
minority youth and children. Students meet with mentors regularly to socialize or to focus
on academic and professional activities, such as visiting the mentor's office, doing school
work, or filling out college applications.

California Partnership Academies:

The California Partnership Academies Program represents a three-way
partnership among the state, local school districts, and supporting businesses. Grants
from the state are matched by direct or in-kind support from the participating business
and school district to set up an academy. Goals are to provide academic and vocational
training to disadvantaged students and to decrease youth unemployment.

Participation in the program is voluntary. To qualify, students whose past records
put them at risk of failing or dropping out of school must show that they "want to turn
themselves around" (Stanford Mid-Peninsula Urban Coalition, 1990). Students apply and
are interviewed in the second semester of 9th grade. Academy staff (teachers,
administrators, counselors) and representatives from the participating business then meet
with parents of applicants to explain the goals of the program, answer questions, address
concerns, and get permission for the students to participate. Selected students enter the
program in the first semester of 10th grade.
Partnership Academies function as a school within a school (Dayton & Stern, 1990). Through block scheduling, students enroll as a group in one technical class (designed with the collaborating business) and three academic classes (English, math, and social studies or science). Students spend the morning in their vocational/technical and academic courses then join the rest of the student body in the afternoon for extracurricular activities (Raby, 1990). Teachers invite outside speakers to share information on career selection, employment skills, and the importance of getting an education.

In 11th grade, each Academy student is matched with a mentor from the business community, who serves as a role model and offers guidance and information on succeeding in the workforce. In the summer following 11th grade, Academy students in good academic standing are given jobs with the participating business, with the goal of improving their employment skills and increasing their chances for gainful employment after graduation.

Other aspects of the program are student recognition (awards for student of the month, excellent attendance, and academic and personal achievement) and parental involvement, sought through questionnaires to parents regarding meeting and workshop topics, invitations to accompany students on field trips, a newsletter, and constant personal contact with Academy staff.

California Partnership Academies have had a positive effect on participating students. They report that being able to see the connection between an education and work makes school more interesting. As one student reported, "I'm 18 and I've had three jobs—all of them at major companies. I've never tossed a fry or slapped a burger, and
thanks to the Academies I won’t have to" (Raby, 1990). The goal is for 94% of Academy students to focus on long-range plans, such as continuing their education, pursuing careers, or both.

Elements of Successful Dropout Prevention Programs

Research findings regarding the characteristics of effective dropout prevention programs are grouped below under five headings: Organization/Administration, School Climate, Service Delivery/Instruction, Instructional Content/Curriculum, and Staff/Teacher Culture.

Organization/Administration:

The way in which a school or program is set up and administered has been found to impact retention of at-risk students and the dropout rate. The following components of the organization and administration of schools and programs serving dropout-prone youth have been identified in the work of Bickel, et al. (1986); Dryfoos (1990); The Dropout Information Clearinghouse (1989); Smink (1990); Peck, et al. (1987); and Asche (1993).

Size and location of the school or program play a role in dropout prevention. Creating schools-within-schools has been found to be effective in countering the high dropout rates associated with many large high schools. Small program size and a low student/teacher ratio are particularly beneficial. Alternative schools designed to serve at-risk populations of students have been successful, as has the practice of locating dropout prevention programs outside of schools in nontraditional settings in the community.

Additional elements of successful programs include:

(1) Administration of programs by agencies outside of schools;
(2) School-based management;

(3) A focus on instructional leadership on the part of the principal;

(4) Fair but uncompromising discipline programs;

(5) Flexible programming and scheduling;

(6) Community and business collaboration;

(7) Staff selection and development;

(8) Transition programs;

(9) Definition and accounting procedures regarding dropout-prone students;

(10) Early intervention efforts;

(11) Schoolwide agreement on goals, objectives, and rules;

(12) Teacher autonomy;

(13) Reducing suspensions and retention;

(14) Eliminating tracking;

(15) Involving community role models;

(16) Promoting business partnerships and community learning; and

(17) Developing collaboration between high schools and colleges.

School Climate:

Attention to overall school climate is supported in the work of Bickel, et al. (1986); The Dropout Information Clearinghouse (1989); Smink (1990); Peck, et al. (1987); Wehlage (1991); and Asche (1993).

A climate characterized by safety and orderliness in a location that is accessible and nonthreatening can make a powerful contribution to dropout prevention. Positive enhancements include staff inservice to increase intercultural sensitivity and involving
parents in school activities as steps to building a "family" atmosphere. A lower incidence of dropping out was also noted in environments where students were actively involved in the design of the program. Such involvement appears to increase their commitment and the perceived relevance of the program in their eyes.

Service Delivery/Instruction:

A common thread, which runs through successful dropout prevention programming, is that it is student centered. No one structure or set of activities works for all students. A variety of strategies in various combinations should be used to address the entire range of student needs or factors that alienate them from school. The following service delivery/instruction elements have been identified as effective in the work of Peck, et al. (1987); Asche (1993); Orr (1987); Wehlage (1991); Bickel, et al. (1986); Dryfoos (1990); The Dropout Information Clearinghouse (1989); and Smink (1990).

Research supports the practice of identifying potential dropouts as early as possible and providing intensive intervention to insure early success. Involving families as much as possible and soliciting parental assistance is also related to success. Intensive individualized attention and instruction, including the use of tutoring and mentoring programs, and instruction technologies are recommended. In addition, successful programs are characterized by instruction and management in which there are clear instructional objectives, activities that are tied to the objectives, and close monitoring of student progress.

The researchers also noted greater success when programs included supportive services such as day care and opportunities to make up work via summer and night school and correspondence. Effective programs characteristically feature student
assistance services to address substance abuse, teen pregnancy and young parenthood, suicide prevention, and other mental and physical health issues.

Instructional Content/Curriculum:

Curricular components related to dropout reduction are identified in the work of Orr (1987); Bickel, et al. (1986); Dryfoos (1990); The Dropout Information Clearinghouse (1989); and Asche (1993).

Early childhood education/preschool and quality kindergarten programs are strongly supported, as is English as a second language and bilingual education. In general, a mix of academic instruction and experiential learning appears to be most beneficial. Successful instruction includes concentrated reading and writing activities, basic skills remediation, test-taking skills, self-esteem building, social skills training, and parenting skills. Learning content with real-world application has been shown to enhance students' interest and involvement.

Links to the world of work in successful programs include goal setting, vocational skills, job training, work-study, work attitudes and habits, and career counseling. In addition, summer enhancement programs are effective motivators and remediation opportunities.

Staff/Teacher Culture:

Findings regarding staffing for effective dropout prevention programs are found in the work of Bickel, et al. (1986); Asche (1993); Peck, et al. (1986); and the Dropout Prevention Clearinghouse (1989).

In successful programs staff members are committed to program success and hold high expectations for student academic achievement and behavior. Caring adults deal
with the "whole child," showing interest and concern. A climate of collegiality exists among staff and extends to engendering a sense of belonging in children and their families.

Ineffective Dropout Prevention Practices

Research that has yielded information on effective dropout prevention practices has also produced findings about ineffective practices. Unfortunately, these practices can still be found. Ineffective practices identified in the work of Dryfoos (1990) include:

- State-mandated promotion policies. If standards and requirements are raised without support for school improvement and without personal attention to the varied populations of high-risk students and their specific learning requirements, the effect will be to push more young people out of school.
- Ability grouping. Students' self-concepts suffer as a result of labeling them average or below. Placement in lower ability groups is associated with lower teacher expectations and reduced learning.
- Early intervention without follow-up.
- Basic skills teaching by itself.
- Work experiences and on-the-job training with no other interventions. There is need for some kind of individual attention or mentoring as well.
- Grafting additional staff and programs onto existing ineffective structures, e.g., extending the school day or adding more courses.
- Increasing the number of attendance officers to cut down on truancy.

Specific Successful Dropout Prevention Programs

The programs described below have been evaluated and found to be successful as measured by reduced dropout rates and increased school completion rates. Not included
are the numerous programs which serve the population of preschool through the early elementary grades.

♦ The Adopt-A-Student Program, operating in Atlanta, Georgia since 1983, pairs business volunteers as mentors with low-achieving high school juniors and seniors in a career-oriented support system. Students are helped to think about future employment, identify occupational interests, and begin taking steps to get a job that matches them. One result has been an increase in the graduation rate in contrast to a comparison group of nonparticipants. (Orr 1987; Dryfoos 1990)

♦ Project Coffee in Oxford, Massachusetts targets potential dropouts from 16 regional school districts. Components of the program include: comprehensive vocational instruction, integration of academics and occupational training, counseling, job training and work experience, and a school-business and industry partnership. Outcomes include improved attendance, increased basic skills competencies, and a lower dropout rate. (Orr 1987)

♦ Rich's Academy, located in a major downtown Atlanta, Georgia department store, is an alternative high school serving former dropouts and near dropouts. The program, in which volunteers play a vital role, is administered by Exodus, Inc., an Atlanta-based nonprofit corporation. Students are placed at random into "family groups" of 20-30 members that meet daily for group counseling and mutual support. Staff members provide supportive counseling and referrals in the "extended day" program which runs until 6:00 p.m. Parents are encouraged to participate, and the staff visit each student's home at least once to share the program objectives. The completion
rate is 85 percent, with all graduates going on to jobs or postsecondary school. (Orr 1987)

- The Alternative Schools Network in Chicago, Illinois targets neighborhood school dropouts. Community-based alternative schools and youth centers provide a structured program of education, including GED preparation, employment preparation, job training and counseling. The program illustrates an effective way for community-based organizations to target the needs of youth dropouts in their neighborhoods and to work together in raising funds and designing a focused program. A 60-70 percent high school/GED completion rate has been reported. (Orr 1987)

- Washington State-Funded Educational Clinics are local centers designed to provide short-term educational intervention services to dropouts aged 13-19. In addition to basic academic skills instruction taught in small groups or individually, the clinics provide employment orientation, motivational development, and support services. Sixty-six percent of the students successfully complete the program by obtaining a GED, transferring into another educational program, or obtaining full-time work. (Orr 1987)

- City-As-School (CAS) is an independent alternative high school program that combines academic learning with the world of work for students in New York City. Students learn in specialized small classes which utilize community resources of a business, civic, cultural, social or political nature. Weekly seminar groups serve as a forum for discussions of guidance, academic and social issues. Evidence of program effectiveness is an increase in the course completion rate of students. (NDN 1993)
The Coca-Cola Valued Youth Program features cross-age tutoring designed to reduce the dropout rates among middle school children who are limited-English-proficient and at risk of leaving school. Commitment is created by involving students and parents with teachers in setting goals, making decisions, monitoring progress, and evaluating outcomes. The support strategy includes coordination and family involvement. Student tutors participating in the program have a significantly lower dropout rate than the comparison group and national rates. In 1992, the program was recognized by the Secretary of Education as a model dropout prevention program, meeting the National Education Goal No. 2 of increasing the high school graduation rate to at least 90 percent. (NDN 1993)

The Lincoln Educational Alternative Program (LEAP) in Wisconsin Rapids, Wisconsin is an alternative educational program nested within a larger, traditional high school. For juniors who are "credit deficient and unlikely to graduate," this two-semester program combines intense academic and counseling work on social as well as academic skills. Classes are small, and there is a conscious effort to build group unity among the students involved. Improved rates of graduation are reported among participants. (Bickel, et al. 1986)

An example of a system-wide, multi-component program to reduce the dropout rate operates in School District 60 in Pueblo, Colorado. The schools serve a working-class community where half the students are Hispanic. Early identification and intervention (as early as preschool) are high priorities, facilitated by a computerized tracking system. The program involves parents, and mentoring by volunteer adults and peers is stressed. Components include a teen mother program and a program for dropout
reentry for all students. Rules on suspension have been changed: students who commit minor disciplinary offenses are isolated for up to five days and monitored by a supervisor. Resource teachers spend their time counseling and supporting students and their families. The dropout rates fell significantly in the school system during the two-year period reported. The retention rate for Hispanics showed marked improvement, with greater changes than those noted for other students. (Dryfoos 1990)

- Upward Bound, a national program that has been in operation since 1965, provides academic and other kinds of assistance to economically disadvantaged, underachieving students who show potential for completing college. Colleges and universities or secondary schools with residential facilities operate Upward Bound programs in cooperation with high schools and community action programs. Intervention strategies include: remedial instruction, immersion in new curricula, tutoring that often extends into the school year, cultural enrichment activities, and counseling. During summer sessions students reside in campus housing and undergo intensive training for six weeks or longer. Evaluations of the program conclude that Upward Bound is successful in getting students to graduate from high school. (U.S. Department of Education 1993)

- At George Washington Preparatory High School, located in south-central Los Angeles, both parents and students are required to sign a contract. Parents must attend workshops on how to help their children and must visit the schools at designated times. Teachers must make daily calls to the homes of absentees. Absenteeism was
less than 10 percent in the 1985-86 school year, and 70 percent of the students now
go on to college. (U.S. Department of Education 1993)

- The New York City Dropout Prevention Program focuses on the transition from
junior high to senior high school, a stress point in the lives of adolescents that
contributes to dropping out. The high schools have become social institutions that
provide help for students and their families. Using a team approach, the resources of
public and private agencies provide adolescents with support. Parents are an integral
part of the program and are considered central to success. Overall, the philosophy is
to provide adolescents with caring adults who understand their needs and who will
support them. Implemented programs include flexible schedules, job development
and placement for seniors, incentives for those who show effort and achievement,
part-time employment that helps students achieve the transition from school to work,
and tutoring and mentoring of younger at-risk students by older ones. Two years after
the program was put into place the dropout rate went from 42 percent in 1985 to 30
percent in 1987. (U.S. Department of Education 1993)

Recommendations for Reducing Dropout Rates

Based on the research they have conducted and analyzed, researchers have offered
recommendations for holding at-risk students longer in school and reducing the dropout
rate. These recommendations are a synthesis based on the work of the 1993 National
Education Goals Report; Goal 2 Work Group (1993); School Superintendents and U.S.
Department of Education (1990); Dryfoos (1990, 1993); Wehlage (1991); Winters, et al.
Nation/States/Cities:

1. Implement a consistent nationwide record-keeping system that will allow comparable state high school completion and dropout data to be reported on a regular basis.

2. Design and support research that informs educators and the public about those aspects of students' experiences that determine whether or not these students complete secondary school. Move toward developing and advancing theoretical concepts that treat retention, graduation and school completion as consequences of a dynamic interaction of such variables as student characteristics, school context, occupational prospects, and cultural influences, and that represent dropouts as students who are part of a social world and who interact with the people and institutions that surround them. Such theories offer a rationale for dropout programs based on the motivating properties of students' lives and for future research and design of dropout prevention programs.

3. Develop state policy requiring each school system to establish a management information system (MIS) that provides basic and common data on all students.

4. Develop state policy requiring schools to examine the effects of course failure, grade retention, out-of-school suspension, and other practices that appear to impact at-risk students negatively.

5. Establish state and local policies encouraging the decentralization of large schools and school systems, creating smaller units characterized by site-based management.

6. Establish state and local policies encouraging the development of new curricula
and teaching strategies designed for diverse groups of at-risk students.

7. Develop state and local policies holding schools accountable for their dropout rates through a system emphasizing outcomes and results.

8. Develop broad-based community partnerships aimed at serving at-risk youth.

District:

1. Make school dropouts a district-wide concern, and focus on changing institutions rather than changing individuals.

2. Intervene early. The timing of interventions is critical, i.e., in preschool and middle school. Continuity of effort must be maintained.

3. Set and communicate high expectations.

4. Select and train teachers who are interested in working with at-risk students.

5. Recognize that there is no one solution to this problem; risk factors are interrelated. Provide a broad range of instructional programs to accommodate students with different needs.

6. Provide a package of services within each community. Work with families, churches and other community organizations to develop a collaborative program for dropout prevention. "The strongest area of agreement [between experts' opinions and program practices] is in the efficacy of collaborative, community-wide multi-component programs using a variety of approaches."

   (Dryfoos 1990, p. 34)

7. Encourage and support programs that motivate parents to participate at all levels of their children's education.

8. Establish strong permanent alternatives as part of a comprehensive strategy of
dropout prevention. Alternative schools should be high-status organizations, receiving resources commensurate with the tasks they undertake and the success they demonstrate.

9. Develop and implement a collection system for data on dropouts, and use it to identify groups at risk, set policy and fund programs at the national level.

10. Train staff in methods for identifying at-risk youth.

11. Focus on a team approach for working with at-risk youth.

12. Develop model programs with parents, teachers, business, government, and community participation.

13. Educate children to meet the changing demands of a technological society, not just to get a job in today's market.

14. Provide curriculum that is process oriented as well as content oriented.

15. Strengthen model programs for disadvantaged youth by providing a summer component.

16. Conduct broad-based needs assessment and planning efforts that include parents, students, businesses, and social agencies working with youth and community organizations, as well as teachers and school administrators.

17. Provide dropout prevention activities for all levels, K-12, with an emphasis on early intervention.

18. Review and revise as necessary organizational variables, policies and procedures affecting the school's ability to meet the needs of high-risk youth. This should include review of student-teacher ratios, discipline policies and procedures, absenteeism, truancy, suspension, failing grades, and retention policies.
19. Expand networking as the capacity to create linkages across groups. The dropout problem is a community, business, economic and social problem.

20. Select staff based not only on subject area competency, but also on the ability and desire to provide a respectful caring environment that responds to the needs of the whole child.

21. Build into the program ongoing staff development as well as evaluation and feedback.

School:

1. Identify, target, and monitor potential dropouts early in their high school careers, and continue monitoring their progress as they move through high school.

2. Establish high basic competency expectations for targeted potential dropouts.

3. Enroll targeted potential dropouts in a planned program of vocational and academic study.

4. Use applied instructional strategies to teach basic competencies.

5. Expand targeted students' personal views of their career and education potential and opportunities.

6. Use an interdisciplinary team of vocational, academic, and support personnel to plan and monitor curriculum and to provide extra instructional support to targeted students.

7. Implement a program of personal attention and extra instructional support to targeted students.

8. Involve business and community leaders in retaining students in school and advancing basic competencies of targeted students.
9. Involve parents. Research conducted by staff of the Southwest Educational Development Laboratory states that some parent involvement programs have produced effects on student achievement "ten times as large as that of socioeconomic status."

10. Reassess the relevance of all educational programs which should reflect students' current and longer-term social and economic interests.

11. Make a positive school climate and positive relationships high priorities in the school and in the classroom. Students need to feel attached to school as a supportive community that recognizes their individuality and that cares about and promotes their success.

12. Students at risk need to have their efforts at school work recognized and rewarded.

13. Address conditions beyond school as feasible and appropriate. Students' out-of-school problems often need to be addressed before they can succeed academically.

Conclusion

This study does not only validate the literature on the demographic studies done on students’ dropout rates but also adds to the literature the roles of the contextual factors such as family background, school experiences, and social influences in students’ dropout rates.

There is no one magical, quick fix solution to the dropout problem. The problem is complex and requires a complex array of solutions. Dropouts have dissimilar
characteristics and therefore need different kinds of programs, which respond to their individual circumstances, and needs. Programs, to be effective, need to provide one-on-one intensive attention to at-risk students, who often must be convinced that they are competent and can be successful in school. The curriculum should include basic educational skills, social skills, and experiential education. In addition, the interrelated causes and multiple problems associated with dropping out call for comprehensive community-wide, multi-service approaches and multi-component programs if Goal 2 is to be achieved.

Children at-risk need to be identified at a young age (as early as preschool) so that early-sustained intervention can be applied. Success in the elementary grades diminishes the possibility of later dropping out in high school. The key to reducing the dropout rate is helping youth to overcome their sense of disconnectedness. It is imperative not to isolate or alienate any students from the school.

Not all factors related to dropout reduction are school controllable; the schools alone cannot achieve solutions to the complex problem of dropouts. It is a national problem that must be addressed by the whole society. It requires resources that go beyond the school, and solutions require a team approach—the combined efforts of students, parents, teachers, administrators, community-based organizations, and business, as well as the federal, state, and local governments.
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

This study validates past studies done on Hispanic students' dropout rates that used demographic variables – sex, ethnicity, and SES. It also investigates the roles of the contextual factors such as: family background, school experiences, and social influences in the high Hispanic students' dropout rates; as well as examines the differences between the Hispanic students who completed their high school diploma and those who dropped out.

In particular, the study offers a broad investigation into the factors that may be associated with the high Hispanic students' dropout rate. It considers not only the demographic factors but also investigates the roles of family background, school experiences, and social influences in the Hispanic students' dropout.

The analysis was based on the demographic, academic ability, family background, school experiences, and social influence factors taken from a national sample of high school sophomores twelve years after high school. The variable Dropout was the dependent variable; while the independent variables were:

i. Family Socioeconomic Status (SES),
ii. Academic Ability (Test Score),
iii. Student Gender (Sex),
iv. Employment Status (ES),
v. Sibling Academic Status (SAS),
vi. Repeated a Grade (Retained),

vii. Citizenship Status (CS)/English Proficiency,

viii. Pregnancy/Fatherhood (PF),
ix. Alcohol and Drug Use (ADU),

x. Friends Academic Status /Interest in School (Friends),

xi. Cut Classes (Truancy/Absenteeism), and

xii. High School Location (Urbanicity).

In order to develop a predictable model, Family Socioeconomic Status (SES),
Academic Ability (Test Score), Sex, Ethnicity, Employment Status (ES), Sibling
Academic Status (SAS), Repeated a Grade (Retained), Citizenship Status (CS)/English
Proficiency, Pregnancy/Fatherhood (PF), Alcohol and Drug Use (ADU), Friends Interest
in School (Friends), Cut Classes (Truancy), and High School Location (Urbanicity) are
used as the independent variable while Dropout is used as the dependent variable.

Selection of Subjects

Unit of Analysis:

This study was conducted on the 1980 sophomore class using the 1992 High
School and Beyond longitudinal dataset. Ten years had passed since these students were
scheduled to graduate from high school, and most were either 28 or 29 years old. This
1992 survey is the fourth follow-up of this cohort since the first data collection in 1980.

The study is longitudinal and capitalizes on the long-term aspects of this group of
1980 high school sophomores as they proceeded through school. The sophomore data
span 1980 through 1992 and include parent data, teacher feedback, high school transcripts, financial aid records, and college transcripts.

Sampling Procedure

The research population was drawn from the High School and Beyond (HS&B) dataset of the 1980 high school Sophomore Cohort (14,825 students). The 1980 Sophomore Cohort dataset is taken from a highly stratified national sample of this group of students, ten years after high school.

The HS&B data were not only highly stratified but also involved over 1,100 secondary schools that were randomly selected to participate in the survey.

Certain types of schools were over sampled to ensure that adequate numbers of diverse students were represented in the sample. The over sampled types of schools were as follows: public schools with high or low minority student populations, Catholic schools, alternative public schools, and private schools with high achieving students.

Research Design

The HS&B database captured the periodic changes and progress in students’ educational and non-educational activities due to its longitudinal nature. Students were classified by the following independent variables: academic ability (test score), race (ethnicity), family socioeconomic status (SES), gender (sex), employment status (ES), sibling academic status (SAS), repeated a grade (retained), citizenship status (CS)/English Proficiency, pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends interest in school (friends), cut classes (truancy), and high school location (urbanicity).
Beginning with the first follow-up year, 1982, and through the subsequent follow-ups, those students whose race/ethnicity were classified as Hispanic were identified. Students who were not classified as Hispanic were eliminated from the sample. This process reduced the number of students from 14,825 to 3,251.

Of all the independent variables, the following variables: gender (sex), citizenship status (CS)/English Proficiency, alcohol and drug use, employment status (ES), pregnancy/fatherhood (PF), repeated a grade (retained), friends dropped out, sibling dropped out (SAS), and interested in school are naturally dichotomized. Academic ability (GPA), family socioeconomic status (SES), ethnicity (race), cut classes (truancy), and high school location (urbanicity) have many different classes. For instance, ethnicity was comprised of Black, White, Asian, Hispanic, or Native American; SES consisted of Upper, Upper-Middle, Middle, and Lower quartiles; and GPA embraced eight different levels.

Table 1 - Organization of Variables – Sophomore cohort

<table>
<thead>
<tr>
<th>Survey</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES</td>
<td>(Lower, Middle, Upper-Middle, &amp; Upper) Quartiles</td>
</tr>
<tr>
<td>GPA</td>
<td>(8 Categories that ranged from &lt;60 to 100)</td>
</tr>
<tr>
<td>Sex (Gender)</td>
<td>(Male/Female)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>(Asian, Black, Hispanic, Native American, &amp; White)</td>
</tr>
<tr>
<td>Cut Classes (Truancy)</td>
<td>Often, Sometimes, and Rarely-Never</td>
</tr>
<tr>
<td>Worked over 20 hrs/Week?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Sibling(s) Dropped Out?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Repeated Grade (Retained)?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Born in the U.S.?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Was Pregnant/Father?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Used Drugs/Alcohol?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Friend(s) Dropped Out?</td>
<td>Yes/No</td>
</tr>
<tr>
<td>H.S. Location (Urbanicity)</td>
<td>Urban, Suburban, and Rural</td>
</tr>
<tr>
<td>Dropout</td>
<td>(H.S. Grad/H.S. Dropout)</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The weights of academic ability (GPA/Test Score), race (ethnicity), family socioeconomic status (SES), gender (sex), employment status (ES), sibling academic status (SAS), repeated a grade (retained), citizenship status (CS)/English Proficiency, pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends interested in school (friends), cut classes (truancy), and high school location (urbanicity) on high school completion were analyzed using the multiple linear regression technique.

Data Collection

Source of Data

All subjects are taken from the longitudinal study of the High School and Beyond (HS&B) dataset. The HS&B longitudinal data series provided by the National Center for Education Statistics (NCES) at the United States Department of Education studied the transitions of young adults from high school through postsecondary education and into their careers.

The National Education Longitudinal Studies (NELS) program of the National Center for Education Statistics (NCES) was established to study the educational, vocational, and personal development of young people beginning with their elementary or high school years, and following them over time as they begin to take on adult roles and responsibilities.

The HS&B survey included two cohorts: the 1980 senior class, and the 1980 sophomore class. Both cohorts were surveyed every two years through 1986, and the 1980 sophomore class was surveyed again in 1992.
Consequently, a base year and three follow-up surveys were conducted at 2-year intervals for the sophomores and seniors. Base year data were collected in the spring of 1980 from nationally representative samples of over 30,000 sophomores and 28,000 seniors. A subset (14,825) of the 30,000 sophomores was surveyed.

The first follow-up data were collected in the spring of 1982 and included 29,737 of the 1980 sophomores and a subset of 11,995 of the 1980 seniors. But only a subset of the sophomores (14,825) were surveyed.

The second follow-up data files include subsets of 14,825 of the 1980 sophomores (92% of whom participated in 1984) and 11,995 of the 1980 seniors (91% of whom participated in 1984).

The third follow-up data files include the same subsets of 14,825 of 1980 sophomores (91% of whom participated in 1986) and 11,995 of the 1980 seniors (92% of whom participated in 1986).

The fourth follow-up data were collected in 1992 but only on the sophomore cohort.

<table>
<thead>
<tr>
<th>Survey</th>
<th>Year</th>
<th># Participated</th>
<th># Non Participants</th>
<th>% Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Year</td>
<td>1980</td>
<td>13749</td>
<td>1076</td>
<td>92.7%</td>
</tr>
<tr>
<td>1st Follow-up</td>
<td>1982</td>
<td>14102</td>
<td>723</td>
<td>95.1%</td>
</tr>
<tr>
<td>2nd Follow-up</td>
<td>1984</td>
<td>13682</td>
<td>1143</td>
<td>92.3%</td>
</tr>
<tr>
<td>3rd Follow-up</td>
<td>1986</td>
<td>13425</td>
<td>1400</td>
<td>90.6%</td>
</tr>
<tr>
<td>4th Follow-up</td>
<td>1992</td>
<td>12640</td>
<td>2185</td>
<td>85.3%</td>
</tr>
</tbody>
</table>
Variables

The analysis was based on demographic, academic, family background, school experiences, and social influence variables. The independent variables were the academic ability (GPA/Test Score), family socioeconomic status (SES), gender (sex), employment status (ES), sibling academic status (SAS), repeated a grade (retained), citizenship status (CS)/English Proficiency, pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends interested in school (friends), cut classes (truancy), and high school location (urbanicity). The variable high school completion was the dependent variable.

Statistical Analysis

Method of Analysis

In order to develop a predictive model, a Stepwise Multiple Linear Regression analysis was conducted using the SPSS for Windows statistical package where completion was the dependent variable; academic ability (GPA/Test Score), family socioeconomic status (SES), gender (sex), employment status (ES), sibling academic status (SAS), repeated a grade (retained), citizenship status (CS)/English Proficiency, pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends interested in school (friends), cut classes (truancy), and high school location (urbanicity) were the independent variables.

The Stepwise model was chosen because it enabled the evaluation of each independent variable’s contribution in explaining the dependent variable – Dropout. At each step, the weight of each variable was calculated to determine the contribution of each variable to the prediction.
The multiple linear regression technique requires that the independent and
dependent variables be measured on an interval scale. Binary variables satisfy this
requirement; consequently, nominal variables such as gender (sex), employment status
(ES), sibling academic status (SAS), repeated a grade (retained), citizenship status (CS)
/English Proficiency, pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends
interested in school (friends), cut classes (truancy), and Completion were coded in binary
(dummy) variables.

This study determined the degree of linear dependence of Completion on the
twelve independent variables (academic ability (GPA/Test Score), family socioeconomic
status (SES), gender (sex), employment status (ES), sibling academic status (SAS),
repeated a grade (retained), citizenship status (CS)/English Proficiency,
pregnancy/fatherhood (PF), alcohol and drug use (ADU), friends interested in school
(friends), cut classes (truancy), and high school location (urbanicity).
CHAPTER 4

ANALYSIS AND FINDINGS

The purpose of the study is to offer a broad investigation into the factors that may be associated with high Hispanic students' school dropout rates. The analysis is based on demographic factors, academic ability, family background, school experiences, and social influence factors taken from a national sample of high school sophomores twelve years after high school. The variable Dropout is the dependent variable while the independent variables are:

i. Academic Ability (Test Score),

ii. Family Socioeconomic Status (SES),

iii. Student Gender (Sex),

iv. Employment Status (ES),

v. Sibling Academic Status (SAS),

vi. Repeated a Grade (Retained),

vii. Citizenship Status (CS)/English Proficiency,

viii. Pregnancy/Fatherhood (PF),

ix. Alcohol and Drug Use (ADU)/Substance Abuse,

x. Friends Interest in School (Friends),

xi. Cut Classes (Truancy), and

xii. High School Location (Urbanicity).
The analysis focused on the research questions which explored whether there were differences in Academic Ability (GPA), Family Socioeconomic Status (SES), Student Gender (Sex), Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity) between the Hispanic students who graduated from high school and those who dropped out. The analysis examined the following specific subproblems using crosstabulations:

1. Differences in GPA between the Hispanic students who graduate from high school and those who drop out.

2. Differences in SES between the Hispanic students who graduate from high school and those who drop out.

3. Differences in Gender between the Hispanic students who graduate from high school and those who drop out.

4. Differences in Employment Status between the Hispanic students who graduate from high school and those who drop out.

5. Differences in Sibling Academic Status between the Hispanic students who graduate from high school and those who drop out.

6. Differences in Repeating a Grade between the Hispanic students who graduate from high school and those who drop out.

7. Differences in Citizenship Status/English Proficiency between the Hispanic students who graduate from high school and those who drop out.
8. Differences in Pregnancy/Fatherhood between the Hispanic students who graduate from high school and those who drop out.

9. Differences in Substance Abuse between the Hispanic students who graduate from high school and those who drop out.

10. Differences in Friends Interest in School between the Hispanic students who graduate from high school and those who drop out.

11. Differences in Truancy between the Hispanic students who graduate from high school and those who drop out.

12. Differences in High School Location between the Hispanic students who graduate from high school and those who drop out.

Analysis Technique

In order to determine the degree of linear dependence of dropout on the twelve independent variables GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity), a Stepwise Multiple Linear Regression analysis was conducted using SPSS statistical package for Windows where dropout was the dependent variable; GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity) were the independent variables.
The Stepwise model was chosen because it enables the evaluation of each independent variable's contribution in explaining the dependent variable - dropout. At each step, it was determined which variable added what information to the prediction.

Data Analysis Tasks

The first task in the data analysis was to report the univariate frequency distribution of cases for the independent variables, GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity).

The second chore was to report the bivariate results from the crosstabulation of the dependent variable, dropout with the twelve independent variables, GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity).

And finally, the report on the results of the multivariate analysis was conducted using the multiple regression analysis technique.

Univariate Frequency Distribution of Cases

The study on the sophomore cohort was composed of a base year and four follow-up surveys. Base year data were collected in the spring of 1980 from nationally representative samples of over 30,000 sophomores. But, only a subset (14,825) of the
30,000 sophomores were followed at each of the four follow-up studies. However, at each follow-up study, the deceased and non-respondent students were replaced by students who were randomly selected from the pool of 30,000 students. This study, extracted the 14,825 students who participated in the First Follow-up and tracked them through the Fourth Follow-up for analysis. In other words, the replacement students were not included in the analysis. This was done to preserve the consistency of the independent variables, GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Substance Abuse, Friends Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity). The independent variables for the 14,825 study population were distributed as shown below:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td>7347</td>
<td>49.6</td>
<td>49.6</td>
</tr>
<tr>
<td>FEMALE</td>
<td>7478</td>
<td>50.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>14825</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The gender composition of the study population was approximately equal of the 14,825 sample population, 7,478 (50.4%) were female and 7,347 (49.6%) were males.
Table 4 - COHORT: ETHNIC COMPOSITE

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISPANIC OR SPANISH</td>
<td>3251</td>
<td>21.9</td>
<td>21.9</td>
<td>21.9</td>
</tr>
<tr>
<td>AMERINDIAN</td>
<td>292</td>
<td>2.0</td>
<td>2.0</td>
<td>23.9</td>
</tr>
<tr>
<td>ASIAN, PCFC ISLNDR</td>
<td>430</td>
<td>2.9</td>
<td>2.9</td>
<td>26.8</td>
</tr>
<tr>
<td>BLACK</td>
<td>2036</td>
<td>13.7</td>
<td>13.7</td>
<td>40.5</td>
</tr>
<tr>
<td>WHITE</td>
<td>8624</td>
<td>58.2</td>
<td>58.2</td>
<td>98.7</td>
</tr>
<tr>
<td>OTHER</td>
<td>192</td>
<td>1.3</td>
<td>1.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>14825</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The ethnic composition of the 14,825 study population was as follows: 3,251 (21.9%) were Hispanic or Spanish Americans, 292 (2%) were Native Americans, 430 (2.9%) were Asian/Pacific Islanders, 2,036 (13.75%) were African Americans, 8,624 (58.2%) were Caucasian Americans, and 192 (1.3%) were from some other ethnic group not listed above.
Table 5 - COHORT: H.S. GPA (Academic Ability)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOSTLY A 90-100</td>
<td>595</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>HALF A + B 85-89</td>
<td>1811</td>
<td>12.2</td>
<td>12.2</td>
<td>16.2</td>
</tr>
<tr>
<td>MOSTLY B 80-84</td>
<td>3026</td>
<td>20.4</td>
<td>20.4</td>
<td>36.6</td>
</tr>
<tr>
<td>HALF B + C 75-79</td>
<td>3973</td>
<td>26.8</td>
<td>26.8</td>
<td>63.4</td>
</tr>
<tr>
<td>MOSTLY C 70-74</td>
<td>3392</td>
<td>22.9</td>
<td>22.9</td>
<td>86.3</td>
</tr>
<tr>
<td>HALF C + D 65-69</td>
<td>1598</td>
<td>10.8</td>
<td>10.8</td>
<td>97.1</td>
</tr>
<tr>
<td>MOSTLY D 60-64</td>
<td>305</td>
<td>2.1</td>
<td>2.1</td>
<td>99.2</td>
</tr>
<tr>
<td>{ILLEGITIMATE SKIP}</td>
<td>125</td>
<td>.8</td>
<td>.8</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14825</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

The high school GPA of the 14,825 study population revealed that 595 (4%) of the students selected were "A" students, 1,811 (12.2%) were "B+" students, 3,026 (20.4%) were "B" students, 3,973 (26.8%) were "C+" students, 3,392 (22.9%) were "C" students, 1,598 (10.8%) were "D+" students, and the rest were "D" or lower students. In other words, 36.6% of the selected students were "A and B" students, 49.7% were "C and C+" students, and the rest 12.9% were less than "C" students.
# COHORT: BASE YEAR SES QUARTILE

<table>
<thead>
<tr>
<th>SES Quartile</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOWEST QUARTILE</td>
<td>3541</td>
<td>23.9</td>
<td>23.9</td>
<td>23.9</td>
</tr>
<tr>
<td>SECOND QUARTILE</td>
<td>3186</td>
<td>21.5</td>
<td>21.5</td>
<td>45.4</td>
</tr>
<tr>
<td>THIRD QUARTILE</td>
<td>3109</td>
<td>21.0</td>
<td>21.0</td>
<td>66.3</td>
</tr>
<tr>
<td>HIGHEST QUARTILE</td>
<td>3242</td>
<td>21.9</td>
<td>21.9</td>
<td>88.2</td>
</tr>
<tr>
<td>{MISSING}</td>
<td>672</td>
<td>4.5</td>
<td>4.5</td>
<td>92.7</td>
</tr>
<tr>
<td>{LEGITIMATE SKIP}</td>
<td>1075</td>
<td>7.3</td>
<td>7.3</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14825</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

The socioeconomic status (SES) of the 14,825 study population reveals a fairly even distribution - 3,541 (23.9%) were from the "Lowest Quartile," 3,186 (21.5%) were from the "Second Quartile," 3,109 (21.0%) were from the "Third Quartile," 3,242 (21.9%) were from the "Highest Quartile," and 1,747 (11.8%) were not specified.

# H.S. URBANICITY (High School Location)

<table>
<thead>
<tr>
<th>Urbanicity</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN</td>
<td>3630</td>
<td>24.5</td>
<td>24.5</td>
<td>24.5</td>
</tr>
<tr>
<td>SUBURBAN</td>
<td>7442</td>
<td>50.2</td>
<td>50.2</td>
<td>74.7</td>
</tr>
<tr>
<td>RURAL</td>
<td>3753</td>
<td>25.3</td>
<td>25.3</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14825</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
The High School Location (Urbanization) of the 14,825 study population reveals a fairly reasonable distribution. The composition was as follows: 3,630 (24.5%) were from the "Urban Schools," 7,442 (50.2%) were from the "Suburban Schools," and 3,753 (25.3%) were from the "Rural Schools."

Bivariate Crosstabulation Results

Table 8 - Crosstabulation: Ethnicity • COMPHS

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Graduated from High School?</th>
<th>Total</th>
<th>Dropout %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>2341</td>
<td>910</td>
<td>3251</td>
</tr>
<tr>
<td>Nat-American</td>
<td>175</td>
<td>117</td>
<td>292</td>
</tr>
<tr>
<td>Asian-P-Islandr</td>
<td>412</td>
<td>18</td>
<td>430</td>
</tr>
<tr>
<td>Afr-American</td>
<td>1696</td>
<td>340</td>
<td>2036</td>
</tr>
<tr>
<td>Caucasian</td>
<td>7882</td>
<td>742</td>
<td>8624</td>
</tr>
<tr>
<td>Other</td>
<td>187</td>
<td>5</td>
<td>192</td>
</tr>
<tr>
<td>Total</td>
<td>12693</td>
<td>2132</td>
<td>14825</td>
</tr>
</tbody>
</table>

Of the 14,825 study population identified from the First Follow-up, only 2,132 of them dropped out from high school resulting in a 14.4% dropout rate for this cohort. Of the 3251 Hispanic student participants, 910 of them dropped out resulting in a 28% dropout rate for the Hispanic students.

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Table 9 - Hispanic Students Participants: By Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1672</td>
<td>51.4</td>
<td>51.4</td>
<td>51.4</td>
</tr>
<tr>
<td>Female</td>
<td>1579</td>
<td>48.6</td>
<td>48.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>3251</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The gender composition of the 3,251 Hispanic students in the study was as follows: 1672 (51.4%) males, and 1579 (48.6%) females.

Subproblem #1: Are there differences in Test Scores (GPA) between the Hispanic students who graduate and those who drop out?

Table 10 - Crosstabulation: HS Grad / HS Dropout * Test Score Quartile

<table>
<thead>
<tr>
<th></th>
<th>Test Score Quartile 1</th>
<th>Test Score Quartile 2</th>
<th>Test Score Quartile 3</th>
<th>Test Score Quartile 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS Grad / HS Dropout</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Grad</td>
<td>375</td>
<td>743</td>
<td>764</td>
<td>459</td>
<td>2341</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>582</td>
<td>237</td>
<td>69</td>
<td>22</td>
<td>910</td>
</tr>
<tr>
<td>Total</td>
<td>957</td>
<td>980</td>
<td>833</td>
<td>481</td>
<td>3,251</td>
</tr>
</tbody>
</table>

The Test Scores (GPA) of the 3251 Hispanic students participants in the study population revealed that only 375 of the 2341 (16%) graduates were in the "Quartile..."
"Quartile 1/Low Quartile". In other words, most of the dropouts (64%) were not academically able students; therefore, there are differences in Test Scores (GPA) between the Hispanic students who graduate and those who drop out.

Subproblem #2: Are there differences in SES between the Hispanic students who graduate and those who drop out?

Table 11 - Crosstabulation: HS Grad / HS Dropout * SES Quartile

<table>
<thead>
<tr>
<th></th>
<th>SES Quartile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lowest Quartile</td>
<td></td>
</tr>
<tr>
<td>HS Grad / HS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dropout</td>
<td>554</td>
<td>2,341</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>619</td>
<td>910</td>
</tr>
<tr>
<td>Total</td>
<td>1,173</td>
<td>3,251</td>
</tr>
<tr>
<td></td>
<td>Second Quartile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>870</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Third Quartile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>559</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Highest Quartile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>358</td>
<td></td>
</tr>
</tbody>
</table>

The SES of the 3251 Hispanic students who participated in the study population revealed that only 554 of the 2341 (23.7%) of the Hispanic graduates were the "Lowest Quartile" while 619 of the 910 (68%) Hispanic students' dropouts were in the "Lowest Quartile". In other words, most of the dropouts (68%) were from the financially handicapped families; therefore, there are differences in SES between the Hispanic students who graduate and those who drop out.
Subproblem #3: Are there differences in Gender (Sex) between the Hispanic students who graduate and those who drop out?

Table 12 - Crosstabulation: Hispanic HS Grad / HS Dropout * Gender

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HS Grad / HS Dropout</td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>HS Grad</td>
<td>1151</td>
<td>1190</td>
<td>2,341</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>521</td>
<td>389</td>
<td>910</td>
</tr>
<tr>
<td>Total</td>
<td>1,672</td>
<td>1,579</td>
<td>3,251</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students' High School Graduates in the study population 1151 (49%) was male and 1190 (51%) was female. Of the 910 Hispanic students' High School Dropouts in the study population 521 (57.3%) was male and 389 (42.7%) was female. Therefore, there are slight differences in Gender (Sex) between the Hispanic students who graduate and those who drop out.

Subproblem #4: Are there differences in Employment Status between the Hispanic students who graduate and those who drop out?

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Table 13 - Crosstabulation: HS Grad / HS Dropout * Worked More than 20 Hours/Week

<table>
<thead>
<tr>
<th>HS Grad / HS Dropout</th>
<th>Worked More than 20 Hours/Week While in H.S.?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad</td>
<td>757</td>
<td>1584</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>576</td>
<td>334</td>
</tr>
<tr>
<td>Total</td>
<td>1,333</td>
<td>1,918</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students' High School Graduates in the study population only 757 (32%) Worked More than 20 Hours per Week while in High School. But, of the 910 Hispanic students' High School Dropouts in the study population 576 (63%) Worked More than 20 Hours per Week while in High School. Therefore, there are significant differences in Employment Status between the Hispanic students who graduate and those who drop out.

Subproblem #5: Are there differences in Sibling Academic Status between the Hispanic students who graduate and those who drop out?
Table 14 - Crosstabulation: HS Grad / HS Dropout * Sibling Dropped Out

<table>
<thead>
<tr>
<th></th>
<th>Sibling Dropped Out</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS Grad / HS Dropout</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad</td>
<td>645</td>
<td>1696</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>268</td>
<td>642</td>
</tr>
<tr>
<td>Total</td>
<td>913</td>
<td>2,338</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students' High School Graduates in the study population only 645 (27.6%) had a sibling who dropped out from school. Also, of the 910 Hispanic students' High School Dropouts in the study population only 268 (29%) had a sibling who dropped out from school. In other words, sibling academic ability did not make any significant difference between the Hispanic high school graduates and the dropouts. Therefore, there are no differences in Sibling Academic Status between the Hispanic students who graduate and those who drop out.

Subproblem #6: Are there differences in Repeating a Grade (Held Back) between the Hispanic students who graduate and those who drop out?
Table 15 - Crosstabulation: HS Grad / HS Dropout * Ever Repeated Grade/Held Back?

<table>
<thead>
<tr>
<th></th>
<th>Ever Repeated Grade/Held Back?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad / HS Dropout</td>
<td>448</td>
<td>1893</td>
</tr>
<tr>
<td>HS Grad</td>
<td>636</td>
<td>274</td>
</tr>
<tr>
<td>Total</td>
<td>1,084</td>
<td>2,167</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students' High School Graduates in the study population only 448 (19.1%) had been held back for at least one grade. But, of the 910 Hispanic students' High School Dropouts in the study population 636 (70%) of them had been held back for at least one grade. In other words, being held back at least a grade level is a significant predictor of the Hispanic high school graduates and the dropouts. Therefore, there are significant differences in Repeating a Grade (Held Back) between the Hispanic students who graduate and those who drop out.

Subproblem #7: Are there differences in Citizenship (Born in USA?)/English Proficiency between the Hispanic students who graduate and those who drop out?
Table 16 - Crosstabulation: HS Grad / HS Dropout * Born in the U.S.? – Citizenship/English Proficiency

<table>
<thead>
<tr>
<th>HS Grad / HS Dropout</th>
<th>Born in the U.S.?</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad</td>
<td>1866</td>
<td>475</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>247</td>
<td>663</td>
</tr>
<tr>
<td>Total</td>
<td>2,113</td>
<td>1,138</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students’ High School Graduates in the study population only 475 (20.3%) were foreign born. But, of the 910 Hispanic students’ High School Dropouts in the study population 663 (73%) of them were foreign born. In other words, being from a foreign country is a significant predictor of the Hispanic high school graduates and the dropouts. Therefore, there are significant differences in Citizenship (Born in USA?) between the Hispanic students who graduate and those who drop out.

Subproblem #8: Are there differences in Pregnancy/Fatherhood Status between the Hispanic students who graduate and those who drop out?
Table 17 - Crosstabulation: HS Grad / HS Dropout * Pregnant/Fatherhood

<table>
<thead>
<tr>
<th></th>
<th>Pregnant/Fatherhood</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad / HS Dropout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Grad</td>
<td>175</td>
<td>2166</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>298</td>
<td>612</td>
</tr>
<tr>
<td>Total</td>
<td>473</td>
<td>2778</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students’ High School Graduates in the study population only 175 (7.5%) were pregnant or fathered a child while in school. But, of the 910 Hispanic students’ High School Dropouts in the study population 298 (33%) of them were pregnant or fathered a child while in school. In other words, being pregnant or fathering a child while still in school has an impact on the Hispanic high school graduates and the dropouts. Therefore, there are differences in Pregnancy/Fatherhood Status between the Hispanic students who graduate and those who drop out.

Subproblem #9: Are there differences in Substance Abuse (Use of Drug and Alcohol) between the Hispanic students who graduate and those who drop out?
Table 18 - Crosstabulation: HS Grad / HS Dropout * Drug and Alcohol Use (Substance Abuse)

<table>
<thead>
<tr>
<th></th>
<th>Drug and Alcohol Use (Substance Abuse)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HS Grad / HS Dropout</td>
<td></td>
</tr>
<tr>
<td>HS Grad</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>747</td>
<td>1543</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>187</td>
<td>78</td>
</tr>
<tr>
<td>Total</td>
<td>934</td>
<td>1,621</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students’ High School Graduates in the study population, only 2290 students responded to this question and of the 2290 who responded 747 (23%) admitted using drug and alcohol. But, of the 910 Hispanic students’ High School Dropouts in the study population only 265 responded to this question and of the 265 who responded 187 (70%) admitted using drug and alcohol. However, since a large number of the dropout students did not respond to this question, the response to this question is skewed; therefore, it would be inappropriate to generalize that 70% of the dropouts used drug and alcohol. Therefore, based on the data, it is inconclusive to determine that there are differences in Substance Abuse (Use of Drug and Alcohol) between the Hispanic students who graduate and those who drop out.

Subproblem #10: Are there differences in Friends’ Interest in School between the Hispanic students who graduate and those who drop out?
Table 19 - Crosstabulation: HS Grad / HS Dropout * Left Because Friend Dropped Out

<table>
<thead>
<tr>
<th>HS Grad / HS Dropout</th>
<th>Left Because Friend Dropped Out</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HS Grad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Dropout</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2341</td>
<td>2341</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>546</td>
</tr>
</tbody>
</table>

Of the 910 Hispanic students’ High School Dropouts in the study population only 563 responded to this question and of the 563 who responded 17 (3%) admitted leaving school because their friends dropped out. Therefore, friends dropping out of school have no impact in predicting Hispanic students’ high dropout rates. Therefore, there are no differences in Friends’ Interest in School between the Hispanic students who graduate and those who drop out.

Subproblem #11: Are there differences in Truancy (Cutting Classes) between the Hispanic students who graduate and those who drop out?
Table 20 - Crosstabulation: HS Grad / HS Dropout * Truancy (Cut Classes)

<table>
<thead>
<tr>
<th>HS Grad / HS Dropout</th>
<th>Truancy (Cut Classes)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Often</td>
<td>Sometimes</td>
</tr>
<tr>
<td>HS Grad</td>
<td>374</td>
<td>721</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>485</td>
<td>217</td>
</tr>
<tr>
<td>Total</td>
<td>859</td>
<td>938</td>
</tr>
</tbody>
</table>

Of the 2341 Hispanic students' High School Graduates in the study population only 374 students (16%) admitted cutting classes often. But, of the 910 Hispanic students' High School Dropouts in the study population 485 students (53%) admitted cutting classes often. Consequently, Truancy has a significant impact on the high Hispanic students' dropout rate. Therefore, there are significant differences in Truancy (Cutting Classes) between the Hispanic students who graduate and those who drop out.

Subproblem #12: Are there differences in High School Location (Urbanicity) between the Hispanic students who graduate and those who drop out?
Table 21 - Crosstabulation: HS Grad / HS Dropout * H. S. Urbanicity

<table>
<thead>
<tr>
<th>HS Grad / HS Dropout</th>
<th>H. S. Urbanicity (Location)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Suburban</td>
</tr>
<tr>
<td>HS Grad</td>
<td>519</td>
<td>1091</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>577</td>
<td>201</td>
</tr>
<tr>
<td>Total</td>
<td>1,096</td>
<td>1,292</td>
</tr>
</tbody>
</table>

Of the 2,341 Hispanic students' High School Graduates in the study population only 519 students (22%) are from the inner city (Urban) schools. But, of the 910 Hispanic students' High School Dropouts in the study population 577 students (63%) are from the inner city (Urban) schools. Consequently, there are significant differences in High School Location (Urbanicity) between the Hispanic students who graduate and those who drop out.

Multiple Regression Analysis

This multiple regression analysis determined the degree of linear dependence of Dropout on the twelve independent variables - Family Socioeconomic Status (SES), Academic Ability (Test Score), Sex, Employment Status (ES), Sibling Academic Status (SAS), Repeated a Grade (Retained), Citizenship Status (CS), Pregnancy/Fatherhood (PF), Alcohol and Drug Use (ADU), Friends Interest in School (Friends), Cut Classes (Truancy), and High School Location (Urbanicity). For this purpose, the multiple R and R² values yielded the appropriate information. However, R² was used because of its
straightforward interpretation. For instance, if $R^2 = .2822$, then one can say that 28 percent of the variation in the dependent variable (in this case Dropout) is explained by the independent variable (in this case Family Socioeconomic Status (SES), Academic Ability (Test Score), Sex, Ethnicity, Employment Status (ES), Sibling Academic Status (SAS), Repeated a Grade (Retained), Citizenship Status (CS), Pregnancy/Fatherhood (PF), Alcohol and Drug Use (ADU), Friends Interest in School (Friends), Cut Classes (Truancy), and High School Location (Urbanicity)).

The result of the stepwise multiple regression analysis of the independent variables on the 910 Hispanic students who dropped out of high school:

Table 22 - The Contribution /Weight of GPA in High Hispanic Student’s High Dropout

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adj. $R^2$</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>$R^2$ Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.326</td>
<td>.106</td>
<td>.106</td>
<td>.85</td>
<td>.106</td>
<td>1622.323</td>
<td>1</td>
<td>13680</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Predictors: (Constant), Test Score.

For the independent variable GPA, the $R^2$ value was .106. In this case, 10.6 percent of the high Hispanic dropout rate was attributed to the students' academic ability or grade point average (GPA). In other words, the independent variable Test Score (GPA) explained 10.6 percent of the high Hispanic dropout rate.
Table 23 - The Contribution /Weight of SES in High Hispanic Student's High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.369</td>
<td>.136</td>
<td>.136</td>
<td>.83</td>
<td>.136</td>
<td></td>
<td>2</td>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Socioeconomic Status

For the independent variable SES, the $R^2$ value was .136. In this case, 13.6 percent of the high Hispanic dropout rate was attributed to the students' family Socioeconomic Status (SES). In other words, the independent variable SES explained 13.6 percent of the high Hispanic dropout rate.

Table 24 - The Contribution /Weight of Sex (Gender) in High Hispanic Student's High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>R² Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.058</td>
<td>.003</td>
<td>.003</td>
<td>.43</td>
<td>.003</td>
<td></td>
<td>1</td>
<td>3249</td>
<td>.001</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Sex

For the independent variable Sex, the $R^2$ value was .003. In this case, .3 percent of the high Hispanic dropout rate was attributed to the students' Gender or Sex. In other words, the independent variable Sex explained only .3 percent of the high Hispanic dropout rate.
Table 25 - The Contribution of Employment in High Hispanic Student's High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th></th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adj. $R^2$</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>$R^2$ Change</th>
<th>$F$ Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. $F$ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4</td>
<td>.248</td>
<td>.061</td>
<td>.61</td>
<td>.87</td>
<td>.061</td>
<td>894.069</td>
<td>1</td>
<td>13680</td>
<td>.000</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Worked More than 20 Hours/Week

For the independent variable Employment, the $R^2$ value was .061. In this case, 6.1 percent of the high Hispanic dropout rate was attributed to the students' working more than 20 hours per week. In other words, the independent variable Employment Status explained 6.1 percent of the high Hispanic dropout rate.

Table 26 - The Contribution of Sibling Academic Status in High Hispanic Student's High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th></th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adj. $R^2$</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>$R^2$ Change</th>
<th>$F$ Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. $F$ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>5</td>
<td>.196</td>
<td>.039</td>
<td>.038</td>
<td>.42</td>
<td>.039</td>
<td>130.436</td>
<td>1</td>
<td>3249</td>
<td>.000</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Older Sibling(s) Dropped Out of High School

For the independent variable Sibling Academic Status, the $R^2$ value was .039. In this case, 3.9 percent of the high Hispanic dropout rate was attributed to the students' older sibling(s) dropping out of high school. In other words, the independent variable Sibling Academic Status explained 3.9 percent of the high Hispanic dropout rate.
Table 27 - The Contribution of Repeated a Grade in High Hispanic Student's High Dropout

Model Summary: Dependent Variable … Dropout

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>R² Change</th>
<th>F Change</th>
<th>dfl</th>
<th>df2</th>
<th>Sig. F Change</th>
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<tr>
<td>Model</td>
<td>.388</td>
<td>.150</td>
<td>.150</td>
<td>.83</td>
<td>.150</td>
<td>2418.881</td>
<td>113680</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors: (Constant), Held Back (Retained) One or More Grades from 1st to 12th Grade.

For the independent variable Repeated a Grade, the R² value was .150. In this case, 15.0 percent of the high Hispanic dropout rate was attributed to the students' being held back on one or more grade levels. In other words, the independent variable Repeated a Grade (Retained) explained 15.0 percent of the high Hispanic dropout rate.

Table 28 - The Contribution of Citizenship/Foreign Born in High Hispanic Student's High Dropout

Model Summary: Dependent Variable … Dropout

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>R² Change</th>
<th>F Change</th>
<th>dfl</th>
<th>df2</th>
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<tbody>
<tr>
<td>Model</td>
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<td>.190</td>
<td>.190</td>
<td>.49</td>
<td>.190</td>
<td>3407.187</td>
<td>114528</td>
<td>.000</td>
<td></td>
<td></td>
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</tbody>
</table>

Predictors: (Constant), Born in U.S?

For the independent variable Citizenship Status, the R² value was .190. In this case, 19.0 percent of the high Hispanic dropout rate was attributed to the students' being foreign born. In other words, the independent variable Citizenship Status explained 19.0 percent of the high Hispanic dropout rate.
Table 29 - The Contribution of Pregnancy/Fatherhood in High Hispanic Student’s High Dropout

Model Summary: Dependent Variable … Dropout

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.215</td>
<td>.046</td>
<td>.046</td>
<td>.87</td>
<td>660.490</td>
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</tbody>
</table>

Predictors: (Constant), Pregnancy/Fatherhood

For the independent variable Pregnancy/Fatherhood, the $R^2$ value was .046. In this case, 4.6 percent of the high Hispanic dropout rate was attributed to the students’ being either pregnant or a father. In other words, the independent variable Pregnancy/Fatherhood explained 4.6 percent of the high Hispanic dropout rate.

Table 30 - The Contribution of Alcohol and Drug Use in High Hispanic Student’s High Dropout

Model Summary: Dependent Variable … Dropout

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.041</td>
<td>.002</td>
<td>.002</td>
<td>.39</td>
<td>23.669</td>
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</tbody>
</table>

Predictors: (Constant), Alcohol and Drug Use

For the independent variable Alcohol and Drug Use, the $R^2$ value was .002. In this case, .2 percent of the high Hispanic dropout rate was attributed to the students’ using drugs and/or alcohol. In other words, the independent variable Alcohol and Drug Use explained only .2 percent of the high Hispanic dropout rate.
Table 31 - The Contribution of Friends’ Academic Status in High Hispanic Student’s High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
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</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.127</td>
<td>.016</td>
<td>.016</td>
<td>.57</td>
<td>.016</td>
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</tbody>
</table>

Predictors: (Constant), Friends Don’t Think Learning is Important or are Dropping Out.

For the independent variable Friends’ Academic Status, the R² value was .016. In this case, 1.6 percent of the high Hispanic dropout rate was attributed to the students' friends lack of interest, poor performance, or dropping out of school. In other words, the independent variable Friends’ Academic Status explained only 1.6 percent of the high Hispanic dropout rate.

Table 32 - The Contribution of Truancy in High Hispanic Student’s High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
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<td></td>
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<tr>
<td>11</td>
<td>.230</td>
<td>.053</td>
<td>.053</td>
<td>8.48</td>
<td>.053</td>
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</tbody>
</table>

Predictors: (Constant), Students’ Class Attendance.

For the independent variable Truancy, the R² value was .053. In this case, 5.3 percent of the high Hispanic dropout rate was attributed to the students' poor class attendance. In other words, the independent variable Truancy explained 5.3 percent of the high Hispanic dropout rate.
Table 33 - The Contribution of School Location in High Hispanic Student's High Dropout

Model Summary: Dependent Variable ... Dropout

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R²</th>
<th>Adj. R²</th>
<th>Std. Error of the Est.</th>
<th>Change Statistics</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
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</thead>
<tbody>
<tr>
<td>Model</td>
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<td>.081</td>
<td>( .081 )</td>
<td>( .86 )</td>
<td>1</td>
<td>13680</td>
<td>.000</td>
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<tr>
<td></td>
<td>12</td>
<td>.285</td>
<td>.081</td>
<td>( .081 )</td>
<td>( 1213.612 )</td>
<td></td>
<td></td>
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</tbody>
</table>

Predictors: (Constant), Urbanicity.

For the independent variable School Location, the \( R^2 \) value was .081. In this case, 8.1 percent of the high Hispanic dropout rate was attributed to the students' school location. In other words, the independent variable School Location explained 8.1 percent of the high Hispanic dropout rate.

Summary of Findings

In all, there are 14,825 students in the study population and 3,251 (21.9%) of these participants were Hispanic students. Of the 3,251 Hispanic students, 2,341 graduated from high school while 910 (28.0%) dropped out of school.

The results of the multiple regression analysis of the twelve independent variables GPA, SES, Gender, Employment Status (ES), Sibling Academic Status (SAS), Repeating a Grade (Retained), Citizenship Status (CS), Pregnancy/Fatherhood (PF), Substance Abuse, Friends' Interest in School, Cutting Classes (Truancy), and High School Location (Urbanicity), analyzed on the 910 Hispanic student dropouts revealed that 84.4% of high school dropout by the Hispanic students can be associated with the twelve independent variables. The contributions of the twelve independent variables were as follows:
GPA accounted for 10.6%, SES accounted for 13.6%, Sex (Gender) accounted for .3%, Employment (working 20 or more hours per week while attending high school) accounted for only 6.1%, Sibling Academic Status accounted for 3.9%, Repeated a Grade accounted for 15.0%, Citizenship (Foreign Born)/English Proficiency accounted for 19%, Pregnancy/Fatherhood accounted for 4.6, Alcohol and Drug Use (Substance Abuse) accounted for .2%, Friends’ Academic Status accounted for 1.6%, Truancy (Cutting Class) accounted for 5.3%, and Urbanicity (School Location) accounted for 8.1%.

In essence, other variables not considered in the analysis accounted for 15.6% of the high Hispanic students’ dropout rate. However, it should be noted that the following independent variables - Citizenship/English Proficiency (19%), Repeated Grade (15%), SES (13.6%), and Student academic ability/GPA (10.6%) had the most impact; School Location/Urbanicity (8.1%), Employment/working 20 hours or more per week (6.1%) and Truancy (5.3%) had a moderate impact; while Pregnancy/Fatherhood (4.6%), Sibling Academic Status (3.9%), Friends’ Academic Status (1.6%), Sex/Gender (.3%), and Alcohol and Drug Use (.2%) had the least or negligible impact.

In other words, Pregnancy/Fatherhood (4.6%), Sibling Academic Status (3.9%), Friends Academic Status (1.6%), Sex/Gender (.3%), and Alcohol and Drug Use (.2%) were not factors in the prediction of the high Hispanic students’ dropout rates.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter represents a summary of the purpose, the procedures utilized to collect and analyze the data, the findings, and the conclusions derived from the research. Recommendations were submitted for the purpose of shedding some light on possible future studies using the same 1992 High School and Beyond Sophomore dataset.

Summary of Research Purpose

The purpose of the study was to investigate whether there are differences in demographic factors, academic ability, family background, school experiences, and social influence factors between the Hispanic students who graduate from high school and those who dropout. The following specific research questions were addressed:

1. Are there differences in SES between the Hispanic students who complete high school diploma and those who dropout?
2. Are there differences in Test Scores between the Hispanic students who complete high school diploma and those who dropout?
3. Are there differences in Sex between the Hispanic students who complete high school diploma and those who dropout?
4. Are there differences in Employment Status (ES) between the Hispanic students who complete high school diploma and those who dropout?
5. Are there differences in Sibling Academic Status (SAS) between the Hispanic students who complete high school diploma and those who dropout?

6. Are there differences in Repeating a Grade (Held Back /Retained) between the Hispanic students who complete high school diploma and those who dropout?

7. Are there differences in Citizenship Status/English Proficiency between the Hispanic students who complete high school diploma and those who dropout?

8. Are there differences in Pregnancy/Fatherhood between the Hispanic students who complete high school diploma and those who dropout?

9. Are there differences in Alcohol and Drug Use between the Hispanic students who complete high school diploma and those who dropout?

10. Are there differences in Friends Interest in School between the Hispanic students who complete high school diploma and those who dropout?

11. Are there differences in Truancy between the Hispanic students who complete high school diploma and those who dropout?

12. Are there differences in Location of School (Urbanicity) between the Hispanic students who complete high school diploma and those who dropout?

Summary of Sampling Procedure and Analysis

The research population was drawn from the 1992 High School and Beyond (HS&B) longitudinal dataset of the 1980 high school Sophomore Cohort (14,825 students). The 1980 Sophomore Cohort dataset is taken from a highly stratified national sample of this group of students, ten years after high school. The HS&B data were not
only highly stratified but also involved over 1,100 secondary schools that were randomly selected to participate in the survey.

Certain types of schools were over sampled to ensure that adequate numbers of diverse students were represented in the sample. The over sampled types of schools were as follows: public schools with high or low minority student populations, Catholic schools, alternative public schools, and private schools with high achieving students.

The sampling procedure was comprised of two-stage, stratified probability sample design with schools as the first-stage units and students within schools as the second-stage units. In the first-stage a total of 1,122 schools, from a frame of 24,725 schools with grades 10 to 12 were selected for the sample. The second-stage was the selection of the sophomore student participants. Within each school, 36 sophomores were randomly selected. In those schools with fewer than 36 students, all eligible students were drawn in the sample. In all, over 30,000 students, 1,122 high schools, 7,000 parents participated in the survey.

The analysis was based on demographic factors, academic ability, family background, school experiences, and social influence factors. The variables considered were as follow: Family Socioeconomic Status (SES), Academic Ability (Test Score), Sex, Employment Status (ES), Sibling Academic Status (SAS), Repeated a Grade (Retained), Citizenship Status (CS)/English Proficiency, Pregnancy/Fatherhood (PF), Alcohol and Drug Use (ADU), Friends Interest in School (Friends), Cut Classes (Truancy), and High School Location (Urbanicity). The demographic, academic ability, family background, school experiences, and social influence variables were the
independent variables while dropout was the dependent variable. The study conducted a quantitative analysis of the high Hispanic students' dropout rates.

The design of the study called for the review of literature for the purpose of establishing a background on the Hispanic students' school experience.

Summary of Findings

In all, there are 14,825 students in the study population and 3,251 (21.9%) of these participants were Hispanic students. Of the 3,251 Hispanic students, 2,341 graduated from high school while 910 (28.0%) dropped out of school. The study focused on twelve specific research questions. The following provided the findings of the answers to each of the twelve research questions or subproblems:

Subproblem #1: Are there differences in Test Scores (GPA) between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Test Scores (GPA) showed that of the 3251 Hispanic students participants in the study population only 375 of the 2341 (16%) graduates were in the "Quartile 1/Low Quartile" while 582 of the 910 (64%) of the dropouts students were in the "Quartile 1/Low Quartile". In other words, most of the dropouts (64%) were not academically able students; therefore, there are differences in Test Scores (GPA) between the Hispanic students who graduate and those who drop out.

In essence, there were significant differences in Test Scores (GPA) between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Test Scores (GPA) revealed that, 10.6% of the high Hispanic dropout rate can be explained by the students' academic
ability. In other words, 10.6% of the high Hispanic dropout rate can be attributed to the students' Test Scores.

**Subproblem #2:** Are there differences in SES between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by SES showed that of the 3251 Hispanic students participants in the study population only 554 of the 2341 (23.7%) graduates were in the "Lowest Quartile" while 619 of the 910 (68%) of the dropouts students were in the "Lowest Quartile". In other words, most of the dropouts (68%) were from the financially handicapped families; therefore, there are differences in SES between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by SES revealed that, 13.6% of the high Hispanic dropout rate can be explained by the students' Socioeconomic Status class. In other words, 13.6% of the high Hispanic dropout rate can be attributed to the students' SES.

**Subproblem #3:** Are there differences in Gender (Sex) between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Gender (Sex) showed that of the 2341 Hispanic students' High School Graduates in the study population 1151 (49%) was male and 1190 (51%) was female. Of the 910 Hispanic students' High School Dropouts in the study population 521 (57.3%) was male and 389 (42.7%) was female. Therefore, there are little or no differences in Gender (Sex) between the Hispanic students who graduate and those who drop out.
The multiple regression analysis of dropout by Gender (Sex) revealed that, .3% of the high Hispanic dropout rate can be explained by the students' Gender (Sex). In other words, .3% of the high Hispanic dropout rate can be attributed to the students' Gender (Sex).

**Subproblem #4:** Are there differences in Employment Status between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Employment Status showed that of the 2341 Hispanic students' High School Graduates in the study population only 757 (32%) Worked More than 20 Hours per Week while in High School. But, of the 910 Hispanic students' High School Dropouts in the study population 576 (63%) Worked More than 20 Hours per Week while in High School. Therefore, there are differences in Employment Status between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Employment Status revealed that, 6.1% of the high Hispanic dropout rate can be explained by the students' Employment Status. In other words, 6.1% of the high Hispanic dropout rate can be attributed to the students' Employment Status.

**Subproblem #5:** Are there differences in Sibling Academic Status between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Sibling Academic Status showed that of the 2341 Hispanic students' High School Graduates in the study population only 645 (27.6%) had a sibling who dropped out from school. Also, of the 910 Hispanic students' High School Dropouts in the study population only 268 (29%) had a sibling who dropped out from school. In other words, sibling academic ability made negligible
difference between the Hispanic high school graduates and the dropouts. Therefore, there
are no significant differences in Sibling Academic Status between the Hispanic students
who graduate and those who drop out.

The multiple regression analysis of dropout by Sibling Academic Status revealed
that, 3.9% of the high Hispanic dropout rate can be explained by the students’ Sibling
Academic Status. In other words, 3.9% of the high Hispanic dropout rate can be
attributed to the students’ Sibling Academic Status.

Subproblem #6: Are there differences in Repeating a Grade (Held Back) between the
Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Repeating a Grade (Held Back)
showed that of the 2341 Hispanic students’ High School Graduates in the study
population only 448 (19.1%) had been held back for at least one grade. But, of the 910
Hispanic students’ High School Dropouts in the study population 636 (70%) of them had
been held back for at least one grade. In other words, being held back at least a grade
level is a significant predictor of the Hispanic high school graduates and the dropouts.
Therefore, there are significant differences in Repeating a Grade (Held Back) between
the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Repeating a Grade (Held Back)
revealed that, 15.0% of the high Hispanic dropout rate can be explained by the students’
Repeating a Grade (Held Back). In other words, 15.0% of the high Hispanic dropout rate
can be attributed to the students’ Repeating a Grade (Held Back).

Subproblem #7: Are there differences in Citizenship (Born in USA?)/English Proficiency
between the Hispanic students who graduate and those who drop out?
A crosstabulation of the Hispanic students by Citizenship (Born in USA?)/English Proficiency showed that of the 2341 Hispanic students' High School Graduates in the study population only 475 (20.3%) were foreign born. But, of the 910 Hispanic students' High School Dropouts in the study population 663 (73%) of them were foreign born. In other words, being from a foreign country is a significant predictor of the Hispanic high school graduates and the dropouts. Therefore, there are significant differences in Citizenship (Born in USA?)/English Proficiency between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Citizenship (Born in USA?)/English Proficiency revealed that, 19.0% of the high Hispanic dropout rate can be explained by the students' Citizenship (Born in USA?)/English Proficiency. In other words, 19.0% of the high Hispanic dropout rate can be attributed to the students' Citizenship (Born in USA?)/English Proficiency.

**Subproblem #8:** Are there differences in Pregnancy/Fatherhood Status between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Pregnancy/Fatherhood Status showed that of the 2341 Hispanic students' High School Graduates in the study population only 175 (7.5%) were pregnant or fathered a child while in school. But, of the 910 Hispanic students' High School Dropouts in the study population 298 (33%) of them were pregnant or fathered a child while in school. In other words, being pregnant or fathering a child while still in school has an impact on the Hispanic high school graduates and the dropouts. Therefore, there are some differences in Pregnancy/Fatherhood Status between the Hispanic students who graduate and those who drop out.
The multiple regression analysis of dropout by Pregnancy/Fatherhood Status revealed that, 4.6% of the high Hispanic dropout rate can be explained by the students’ Pregnancy/Fatherhood Status. In other words, 4.6% of the high Hispanic dropout rate can be attributed to the students’ Pregnancy/Fatherhood Status.

**Subproblem #9: Are there differences in Substance Abuse (Use of Drug and Alcohol) between the Hispanic students who graduate and those who drop out?**

A crosstabulation of the Hispanic students by Substance Abuse (Use of Drug and Alcohol) showed that of the 2341 Hispanic students’ High School Graduates in the study population only 2290 students responded to this question and of the 2290 who responded 747 (23%) admitted using drug and alcohol. But, of the 910 Hispanic students’ High School Dropouts in the study population only 265 responded to this question and of the 265 who responded 187 (70%) admitted using drug and alcohol. However, since a large number of the dropout students did not respond to this question, the response to this question is skewed; therefore, it would be inappropriate to generalize that 70% of the dropouts used drug and alcohol. Therefore, based on the data, it is inconclusive to determine that there are differences in Substance Abuse (Use of Drug and Alcohol) between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Substance Abuse (Use of Drug and Alcohol) revealed that, .2% of the high Hispanic dropout rate can be explained by the students’ Substance Abuse (Use of Drug and Alcohol). In other words, .2% of the high Hispanic dropout rate can be attributed to the students’ Substance Abuse (Use of Drug and Alcohol).
Subproblem #10: Are there differences in Friends’ Interest in School between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Friends’ Interest in School showed that of the 910 Hispanic students’ High School Dropouts in the study population only 563 responded to this question and of the 563 who responded 17 (3%) admitted leaving school because their friends dropped out. Therefore, friends dropping out of school have no impact in predicting Hispanic students’ high dropout rates. Therefore, there are negligible differences in Friends’ Interest in School between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by Friends’ Interest in School revealed that, 1.6% of the high Hispanic dropout rate can be explained by the students’ Friends’ Interest in School. In other words, 1.6% of the high Hispanic dropout rate can be attributed to the students’ Friends’ Interest in School.

Subproblem #11: Are there differences in Truancy (Cutting Classes) between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by Truancy (Cutting Classes) showed that of the 2341 Hispanic students’ High School Graduates in the study population only 374 (16%) admitted cutting classes often. But, of the 910 Hispanic students’ High School Dropouts in the study population 485 (53%) admitted cutting classes often. Consequently, Truancy has a significant impact on the high Hispanic students’ dropout rate. Therefore, there are significant differences in Truancy (Cutting Classes) between the Hispanic students who graduate and those who drop out.
The multiple regression analysis of dropout by Truancy (Cutting Classes) revealed that, 5.3% of the high Hispanic dropout rate can be explained by the students' Truancy (Cutting Classes). In other words, 5.3% of the high Hispanic dropout rate can be attributed to the students' Truancy (Cutting Classes).

Subproblem #12: Are there differences in High School Location (Urbanicity) between the Hispanic students who graduate and those who drop out?

A crosstabulation of the Hispanic students by High School Location (Urbanicity) showed that of the 2,341 Hispanic students' High School Graduates in the study population only 519 (22%) are from the inner city (Urban) schools. But, of the 910 Hispanic students' High School Dropouts in the study population 577 (63%) are from the inner city (Urban) schools. Consequently, there are significant differences in High School Location (Urbanicity) between the Hispanic students who graduate and those who drop out.

The multiple regression analysis of dropout by High School Location (Urbanicity) revealed that, 8.1% of the high Hispanic dropout rate can be explained by the students' High School Location (Urbanicity). In other words, 8.1% of the high Hispanic dropout rate can be attributed to the students' High School Location (Urbanicity).

Conclusions

As a result of the quantitative analysis and findings generated by this study, the following conclusions were drawn regarding the factors that contribute to the high Hispanic dropout rate:
1. Citizenship/English Proficiency (19%), Repeated Grade (15%), SES (13.6%), and Student academic ability/GPA (10.6%) had the most impact.

2. School Location/Urbanicity (8.1%), Employment/working 20 hours or more per week (6.1%) and Truancy (5.3%) had a moderate impact.

3. Pregnancy/Fatherhood (4.6%), Sibling Academic Status (3.9%), Friends Academic Status (1.6%), Sex/Gender (.3%), and Alcohol and Drug Use (.2%) had the least or negligible impact. In other words, Pregnancy/Fatherhood (4.6%), Sibling Academic Status (3.9%), Friends' Academic Status (1.6%), Sex/Gender (.3%), and Alcohol and Drug Use (.2%) were not factors in the prediction of the high Hispanic students’ dropout rates.

4. The overall contributions of the independent variables - Family Socioeconomic Status (13.6%), Academic Ability (10.6%), Sex (.3%), Employment Status (6.1%), Sibling Academic Status (3.9%), Repeated a Grade (15.0%), Citizenship Status/English Proficiency (19.0%), Pregnancy/Fatherhood (4.6%), Alcohol and Drug Use (.2%), Friends' Interest in School (1.6%), Cut Classes (5.3%), and High School Location (8.1%) in explaining the high Hispanic dropout rate was 84.4%. In other words, 84.4% of the high Hispanic dropout rate can be attributed to those twelve factors, 15.6% of the high Hispanic dropout rate can be attributed to other independent variables that were not considered in this study.

5. The dropout rate of the Hispanic students in this study was found to be 28.0%; because, of the 3251 Hispanic student participants, 910 of them dropped out resulting in a 28% dropout rate for the Hispanic students.
Recommendations for Further Research

As a result of the analysis, findings, and conclusions generated by this study the following recommendations are suggested:

1. Since the independent variables considered in this study - Family Socioeconomic Status (13.6%), Academic Ability (10.6%), Sex (.3%), Employment Status (6.1%), Sibling Academic Status (3.9%), Repeated a Grade (15.0%), Citizenship Status/English Proficiency (19.0%), Pregnancy/Fatherhood (4.6%), Alcohol and Drug Use (.2%), Friends Interest in School (1.6%), Cut Classes (5.3%), and High School Location (8.1%) contributed 84.4% in explaining the high Hispanic dropout rate, similar studies could be done to identify the other independent variables that contributed additional 15.6%.

2. In this study the Hispanic dropout rate is 28.0%, while the Native American students' dropout rate is 40.1%; therefore, a similar study could be conducted to investigate the high Native American students’ dropout rate.

3. Since this study focused on the Hispanic dropout rate at the national level; a similar study can be replicated using the Clark County School District Hispanic dropout students or the State of Nevada Hispanic dropout students.

4. A study on school tracking system can investigate whether schools, as the engine of democracy, should provide relatively similar curricula for all students? Or should they instead sort students by skill levels and prepare them for their different roles as adults?

5. A study can investigate the consequences of completing a GED rather than a regular high school diploma.
INTRODUCTION

High School and Beyond (HS&B) Longitudinal Study, 1980 to 1992, is a national education longitudinal survey conducted by the National Opinion Research Center on behalf of the National Center for Education Statistics. This survey is the second wave of data for a major longitudinal study of American youth. The National Center for Education Statistics (NCES) is mandated by the federal government to "collect and disseminate statistics and other data related to education in the United States". Its purpose is to provide information on the characteristics, achievement, and plans of high school students, their progress through high school, and the transition they make from high school to adult roles. To this end, NCES initiated several large-scale studies in which a cohort is studied at regular intervals over several years.

Specific areas of interest include the educational, vocational, and personal development of young people starting with their primary or secondary school years, and following them as they move into adult roles and responsibilities. Researchers can examine such policy issues as school effects, bilingual education, dropouts, vocational education, academic growth, and access to postsecondary education, student financial aid, and life goals. Information was also compiled regarding school characteristics, high

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school course offerings and course enrollments. For a subset of schools, questionnaires were administered to principals, vocational counselors, guidance counselors, and teachers.

Additional data were gathered from parents, siblings, and administrative records (high school transcripts). In addition, post-secondary information regarding transcripts and financial aid were collected for both the sophomore and senior cohort. Therefore, a wide variety of data are available for analysis.

The first of these studies was the National Longitudinal Study of the High School Class of 1972 (NLS-72). The NLS-72 consisted of a cohort of about 19,000 students who were high school seniors in 1972.

New education issues arose after NCES began its longitudinal study of the 1972 senior class. Declining test scores and minimum competency testing, for example, caused concern among parents and educators alike. The rate at which many students dropped out of high school before graduation was also a concern. Increased opportunities in secondary school vocational education opened new vistas for youths attentive to their futures. And, anxiety over access to post-secondary and vocational education sharpened the focus on the education experiences of Hispanic and other minority youths.

To examine these and other issues, NCES initiated a second longitudinal study, High School and Beyond (HS&B), to complement the first. HS&B studied the high school students of 1980. It attempted to collect the same types of data gathered in the National Longitudinal Study of the High School Class of 1972. However, the second study differed from the first in two significant ways. First, it addressed many newer elements of the educational process. Second, it included a sophomore cohort as well as a
senior cohort. Adding the sophomore cohort made it possible to address the issue of high school dropouts and to study changes and processes during high school.

Description

The HS&B data were collected from 58,270 high school students (28,240 seniors and 30,030 sophomores) and 1,015 secondary schools. Both cohorts were surveyed every two years starting with the Base Year (BY), 1980 through the 3rd Follow-up (FU3) in 1986. The 1980 sophomore class was also surveyed again in the 4th Follow-up (FU4) in 1992. The following components or instruments are only for the sophomore cohort:

- Sophomore cohort questionnaire (BY-FU4)
- Not-currently in high school questionnaire (FU1)
- Transfer and Early Graduate Supplements (FU1)
- Student identification pages (BY)
- Cognitive tests (BY and FU1)
- School questionnaire (FU1)
- Teacher comment checklist (BY)
- Parent questionnaire (mailed to a sample of parents during BY and FU1)

After the first follow-up survey, high school transcripts were sought for a probability sub-sample of nearly 18,500 members of the 1980 sophomore cohort. The post-secondary transcript study was based on the 9,064 sophomore cohort members who reported post-secondary attendance. (December, 1992 to October, 1993)

The data are contained in eight files: a student file, a school file, a parent file, a language file, a teacher-senior file, a teacher-sophomore file, a twins file, and a friends file.
file. Surveys administered to students in the spring of 1980 provided data for the Student file. Included are questionnaire responses on family and religious background, perceptions of self and others, personal values, extracurricular activities, type of high school program, and educational expectations and aspirations. Also supplied are scores on a battery of tests, including vocabulary, reading, mathematics, science, writing, civics, spatial orientation, and visualization. There are 638 variables for each student, with the data contained in one file with a logical record length of 1,025 characters. SPSS control cards and a machine-readable SPSS file are also available.

The School file, which contains data from questionnaires completed by high school principals, outlines various school attributes and programs. There are 237 variables for each school. The data file has a logical record length of 453 characters and is supplemented by a machine-readable SPSS codebook and SPSS control cards. The Language file provides information on each student who reported some non-English language experience, with data on past and current exposure to and use of languages. There are 11,303 records in the file, with 42 variables for each student. Additional files contain SPSS control cards, SAS cards, and frequencies.

The Teacher Comment files contain responses from 14,103 teachers on 18,291 students from 616 schools. Teachers had the opportunity to express knowledge or opinions of High School and Beyond students who had been in their classes. Students were evaluated by an average of four different teachers. The Senior Teacher file contains 67,053 records of 19 characters each, and the Sophomore Teacher file contains 76,560 records of 37 characters. An SPSS/SAS information file accompanies these data files.
The Twin and Sibling file contains data from students in the sample who had twins, triplets, or other siblings who were also surveyed by HSB. Of the 1,348 families included, 524 had twins or triplets only, 810 contained non-twin siblings only, and the remaining 14 contained both types of siblings. The Twins file contains 2,718 records of 1,030 characters each.

The Friends file contains 58,270 records representing the same 30,030 sophomores and 28,240 seniors that are in the Student file. Each record has a logical record length of 24 characters and contains four variables: Student Case ID, First Choice Friend, Second Choice Friend, and Third Choice Friend.

The Parent file provided with the collection is a revision that includes 22 variables inputed by NCES from the original survey data. The new data are concerned primarily with the areas of family income, liabilities, and assets. A sub-sample of students participating in the Student survey was chosen for the Parent survey, with parents of 3,367 sophomores and 3,197 seniors responding. The data include numerous parent opinions and projections concerning the educational future of the student, anticipated financial aid, student's plans after high school, expected ages for student's marriage and childbearing, estimated costs of post-secondary education, and government financial aid policies. Also supplied are data on family size, value of property and other assets, home financing, family income and debts, and the age, sex, marital and employment status of parents, plus current income and expenses for the student. The data are contained in one file of 6,564 records with a logical record length of 588 characters.

Other files provided with the dataset include a machine-readable codebook and SAS control cards.
Design

The study design provided for a highly stratified national probability sample of over 1,100 secondary schools as the first stage units of selection. Certain types of schools were over-sampled to make the study more useful for policy analyses: public schools with a high percentage of Hispanic students; Catholic schools with a high percentage of minority group students; alternative public schools; and private schools with high achieving students. The initial national sample for High School and Beyond was considerably larger than that employed in NLS-72. In this stage, 36 seniors and 36 sophomores were selected in each school.

Parents of these students were also sampled. In schools with fewer than 36 students in either of these groups, all eligible students were selected. The base year of this survey, which was conducted early in 1980, collected data from over 30,000 seniors and 28,000 sophomores.

The longitudinal design of the study called for follow-up surveys of substantial subsets of the two cohorts at 2-year intervals. Data collection for the first follow-up began in spring 1982. Subsequent follow-ups were also undertaken in 1984 and 1986, and another follow-up was conducted in 1992. The first follow-up survey conducted in 1982 sampled almost 40,000 students (12,000 seniors and 27,000 sophomores), the second in 1984 sampled approximately 27,000 students (12,000 seniors and 15,000 sophomores), and the third in 1986 sampled almost 27,000 students (also 12,000 seniors and 15,000 sophomores).
The 1992 follow-up collected data from almost 15,000 sophomores. In 1993 a new Postsecondary Education Transcript Study will be conducted for the sophomore cohort. Data collection instruments in the base-year survey included:

1) sophomore and senior student questionnaires with a series of cognitive tests,
2) school questionnaires filled out by an official in each participating school,
3) teacher comment checklists filled out by a teacher of the sampled student,
4) second language questionnaires, and
5) parent questionnaires filled out by a sample of parents from both cohorts.

The student questionnaires focused on individual and family background, high school experiences, work experiences, and future plans. Cognitive tests administered to students measured both verbal and quantitative abilities.

Sophomore tests included brief achievement measures in science, writing, and civics, while seniors were asked to respond to tests measuring abstract and nonverbal abilities. The parent questionnaire elicited information about how family attitudes and financial planning affects educational goals. The school questionnaire gathered information about enrollment, staff, educational programs, facilities and services, dropout rates, and special programs for handicapped and disadvantaged students. The teacher comment checklist provided teacher observations on students participating in the survey.

The first follow-up of sophomores provided insights into the school dropout problem and into the influence of the last 2 years of high school on student attitudes and aspirations. The second follow-up in 1984 included a Postsecondary Education Transcript Study of the senior cohort. The later follow-ups of the sophomore cohort made it possible to trace the consequences of dropping out, and the extent to which dropouts later return
and complete high school. In brief, HS&B provides information on the educational, vocational, and personal development of young people as they move from high school into postsecondary education or the work force into and then into adult life. The initial study (NLS-72) laid the groundwork for comparison with HS&B. It recorded the economic and social conditions surrounding high school seniors in that year and, within that context, their hopes and plans. It has since measured the outcomes while also observing the intervening processes. High School and Beyond allows researchers to monitor changes by retaining the same goals, measuring the economic returns of postsecondary education for minorities, delineating the need for financial aid, etc. By comparing the results of the two studies, researchers can determine how hopes, plans, and outcomes differ in response to changing conditions or remain the same despite such changes.

Additional concerns of HS&B encompass issues that surfaced since NLS-72 began: How did the availability (or lack thereof) of student financial aid alter student plans for further education? Did middle-income families alter their attitude toward postsecondary education? These questions, as well as concerns about declining test scores, youth employment, and bilingual education are addressed, along with a host of others.

Components

Student Questionnaires:

Age; sex; racial/ethnic background; religion; socioeconomic status of family and
Community; school experiences; test scores; school performance; future educational plans; family status and orientations; work experience and satisfaction; future Occupational goals; plans for and ability to finance postsecondary education; and Cognitive tests.

**School Questionnaire:**

Enrollment; staff; educational programs; facilities and services; dropout rates; and special programs for handicapped and disadvantaged students.

**Teacher Comment Checklist:**

Teacher observations about the student.

**Parent Questionnaire:**

Family attitudes; family income; employment, occupation; salary; financial planning; and how these affect postsecondary education and goals.


Sophomores: similar information as collected in the base year survey plus high school transcripts and data on dropping out. Seniors (not surveyed in 1992 follow-up): age; sex; marital status; community characteristics; work plans; educational attainment; work history; attitudes and opinions; postsecondary school and program characteristics; postsecondary transcripts and credits earned; type of financial aid for postsecondary education.
Policy and Research Issues

The base year survey of HS&B and the follow-up surveys have addressed the issues of educational attainment, employment, family formation, personal values, and community activities since 1980. For example, a major study on high school dropouts used HS&B data to demonstrate that a large number of dropouts return to school and earn a high school diploma or an equivalency certificate. Other examples of issues and questions that can be addressed with HS&B data are:

a) How, when, and why do students enroll in postsecondary education institutions?

b) Did those who (while in high school) expected to complete the baccalaureate (BA) degree actually do so?

c) How has the percentage of recent graduates from a given cohort who enter the work force in their field changed over the past years?

d) What are the long-term effects of not completing high school in the traditional way? How do employment and earnings event histories of traditional high school graduates differ from those who did not finish high school in the traditional manner?

e) Do individuals who attend college earn more than those who do not attend college? What is the effect of student financial aid?

f) What percentage of college graduates are eligible or qualified to enter a public service profession such as teaching?

gh) How many enter the work force full time in the area for which they are qualified?

h) How and in what ways do public and private schools differ?
Mode of Administration

**Base Year:** For both cohorts, group administration of surveys at school.

**First Follow-up:** For the senior cohort, a self-administered mail-back questionnaire; for the sophomore cohort, group administrations at school, or off-campus for dropouts, etc.

**Second Follow-up:** For both cohorts, data were collected through a self-administered mail-back questionnaire. Packets containing survey questionnaires, instruction sheets, and incentive payment checks were sent to sample members.

**Third Follow-up:** As in the second follow-up survey, data were collected through mail-back questionnaires; approximately 27,000 packets of survey materials were mailed to the last known addresses of the sample members. Contact procedures for non-respondents remained unchanged from the previous rounds. Approximately 66% of both samples mailed back their completed questionnaires; 5% of the seniors and 6% of the sophomores were interviewed in person; and about 16% of the seniors and 19% of the sophomores were interviewed by telephone. The survey design again required respondents interviewed by telephone or in person to use a copy of the questionnaire during the interview to minimize the bias due to method of administration. Follow-up interviewing resulted in a completion rate of 88% for the seniors and 91% for the sophomores.

**Fourth Follow-up:** Approximately 12,000 packets containing survey questionnaires, instruction sheets, and incentive payment checks were sent to sample members during the first week of February 1982. Postcards with dual messages seeking a quick reply from non-respondents and thanking early respondents for their cooperation were mailed during the third week following the initial mail-out. Approximately 75% of the targeted senior cohort members completed and returned first follow-up questionnaires by mail. Two
weeks later, those who still had not responded were called by trained telephone
interviewers. An additional 19% completed the questionnaires through either in-person or
telephone interviews. Respondents who completed the questionnaire by telephone were
required to have a copy of the questionnaire in front of them while doing so in order to
keep the survey experience as similar as possible to that of the mail questionnaires.

Follow-up interviewing was halted in mid-July 1982 after a response rate of 94%
had been obtained.

Survey lengths: In the base year, the students were given 60 minutes to complete
surveys and cognitive tests (sophomore only) were approximately 68 minutes. In the
1st follow-up, the transfer supplement took approximately 10 minutes to complete,
and the early graduate supplement took 10-15 minutes. For the fourth follow-up, the
average administration time was 30.6 minutes for the respondent survey.

Sample sizes: The total number of schools selected for the BY sample was 1,122,
from a frame of 24,725 schools with grades 10 or 12 or both. Over 30,000
sophomores and 28,000 seniors enrolled in 1,015 public and private high schools
across the country participated in the base year survey.

The first follow-up sample consisted of about 30,000 1980 sophomores and
12,000 1980 seniors. It retained the multi-stage, stratified, and clustered design of the
base year sample, and all students who had been selected for inclusion in the base year
survey, whether or not they actually participated, had a chance of being included in
the first follow-up survey.

Conducted during the spring and summer of 1984, the second follow-up survey
retained probability samples of about 15,000 1980 sophomores and 12,000 1980
seniors. The sample for the senior cohort was unchanged from that used for the first follow-up survey, while the sample for the sophomore cohort was selected from among the 18,500 cases selected in 1982 for the High School Transcripts study. The sample design for the sophomore cohort was modeled after that used for the first and subsequent follow-ups of the senior cohort, in that subgroups of special relevance to education policy formation (high school dropouts from the sophomore cohort, members of racial and ethnic minorities, those with data from the base year Parents Survey, those enrolled in postsecondary educational institutions, and so forth) were retained in the second follow-up with substantially higher probabilities than others. However, all individuals selected for the base year survey had a nonzero chance of retention in the second follow-up, regardless of whether they participated in the base year or first follow-up surveys.

The senior and sophomore cohort samples for the third follow-up survey were the same as those used for the second follow-up. Again, survey activities were initiated for all sample members.

The fourth follow-up sample of the sophomore cohort contained the same 15,000 members as the second and third follow-up surveys, and attempts were made to contact all but 56 deceased sample members. Overall, 14,670 students were in the sample in all 5 waves.

Incentives: Schools were sent reimbursement vouchers to cover the costs of reproducing student transcripts. During FU1, school leavers were offered monetary incentives for participation ($5 for filling out the follow-up questionnaire and $10 for taking the test), and were reimbursed (up to $10) for travel expenses to and from the
survey sites. Respondents from the senior cohort were sent incentive checks for an unknown amount with the self-administered mail-back questionnaire during FU1. During subsequent follow-ups as well, unknown monetary incentives were sent with self-administered mail-back questionnaires to all sample members.

Response Rates: School non-response rate for the study was about 30%. Public schools had higher response rates than private and parochial schools.

Unlike "refusal" schools, nonparticipating students were not dropped from the sample; they remained eligible for selection into the follow-up samples. Base year student response rate was 92.8%. FU1 student response rate was 95.3%. FU2 student response rate was 92.5%. FU3 student response rate was 90.8%. FU4 student response rate was 86.2%. These response rates are calculated based on the 14,670 students who were in the sample for all five study years. Overall, student response rate was 71.8% (% eligible who participated in ALL five rounds).

For 4th follow-up, the highest non-response rates occur in the West (16.3%) and the Northeast (16.1%). The lowest non-response rates occur among participants who had been students in the North Central region (10.9%). Non-response was positively correlated with urbanization. Students at schools with a large percentage of Blacks (>=25 %) showed somewhat higher rates of non-response than students at schools with fewer Blacks. Student non-response is also positively correlated with school size.

For 4th Follow-up, Non-Response by Race: White 10.1%, Black 20.6%, Hispanic 19.4%, Other/unknown 40.3%; non-response by SES quartile: 9.5% top quartile, 11.7% middle two, 14.7% lowest, 38.8% of other/unknown. Students who had no
postsecondary education (by the time of the second follow-up) had higher rates of nonresponse (14.3%) than students with only vocational postsecondary education (9.2%) or other postsecondary education (8.1%).

For the post-secondary transcript study (1992-93) response rates varied by institution type from 50.4% at private, for-profit institutions to 95.1% at public, 4-year institutions; 80.8% overall. The response rate by students reporting postsecondary attendance was 93.2% (with at least one transcript).

Data availability: Basic descriptive statistics can be obtained by using the NCES Data Analysis System. For the full dataset, users must apply for a restricted data license from NCES.

Data Analysis System (DAS)

The Data Analysis System (DAS) is a Windows software application that provides public access to NCES survey data. With the DAS, users can generate tables of percentages, means, or correlation coefficients simply by choosing the DAS variables (based on survey questionnaire items) that they would like to appear in a table and indicating what function should be used. Users specify the information they would like to appear in a table by creating a table parameter file (TPF) and sending the TPF to the NCES DAS Web site. The Web site will process the TPF and generate the table in the form of a PRN file. The PRN file provides the table numbers (usually percentages of students) and the corresponding standard errors that have been calculated taking into account the complex sampling procedures used in the NCES surveys.
Restricted Data Licenses

First, verify whether your organization already has a restricted data license; and if so, the license number, to whom it was issued, the purpose of the research, and for which NCES datasets(s) it is valid.

If your organization does not have a restricted data license already, you will need to review the procedures described in "NCES' Restricted-Use Data Procedures Manual". If your organization has a valid restricted data license, at the very least you will need to have it amended to add any additional datasets or to add your name as an authorized user of the data.

To obtain a restricted data license (or to amend an existing license), one must send a letter addressed to the NCES Data Security Office, formally requesting the data. The mailing address is as follows:

Data Security Office  
Department of Education/NCES/ODC  
1990 K Street NW, Room 9061  
Washington, D.C. 20006

In that letter, you will need to include the following:

1. The license number you wish to amend  
2. The name of the dataset(s) you wish to use  
3. The purpose for the loan of the data  
4. The length of time you will need the data  
5. The computer security plan you will follow  
6. The list of authorized users  
7. An affidavit of nondisclosure for each person, promising to keep the data completely confidential.
If you are amending an existing license and if your purpose is a continuation of the project that was approved originally, you may be able to omit (or condense) the abstract of your research design, but it must be specific enough to justify using the raw data. Similarly, if you plan to use the same computer(s) as the person(s) who are already licensed users, you may be able to update the computer security plan previously approved. Please be sure to follow the computer security plan carefully as spot site inspections do occur.

In the case of post-secondary institutions, only faculty can serve as the primary project officer. Graduate students may be listed as authorized users only. For more information, contact:

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NCES Efforts in Data Collections Measuring Education Transition Issues in the U.S.

Transition issues can be analyzed using a number of different data collections in the U.S. Longitudinal surveys typically provide the best data for examining transitions from one stage of life to another. Longitudinal surveys follow cohorts of individuals as they make changes from one situation to another. NCES has conducted a series of longitudinal studies of high school students, starting in 1972, with the next longitudinal study planned to start in 2002. This series of longitudinal studies does not only follow students from high school to further education, employment, or non-employment but also allows for comparisons of the transition experiences of different cohorts of students across three decades. In addition, other NCES surveys follow students from postsecondary school to employment or further education. These surveys are summarized below.

National Longitudinal Study of the High School Class Of 1972

The National Longitudinal Study of the High School Class of 1972 (NLS:72) was the earliest of ED’s longitudinal surveys. The initial student cohort were high school
seniors (grade 12, about age 17) in the spring of 1972. Follow-up surveys were conducted in 1973, 1974, 1976, 1979, and 1986; high school records and postsecondary transcripts were also collected. Data thus are available to examine the transitions of individuals from high school to other activities until their early 30s.

The sample for the NLS:72 was a stratified, two-stage probability sample of 12th grade students from public and private schools. During the first stage of sampling, about 1,070 schools were selected for participation in the base-year survey. As many as 18 students were selected from each of the sample schools. Both the school and student samples were increased during the first follow-up survey. The response rates for each of the different rounds of data collection have been 80 percent or higher.

High School and Beyond

The High School and Beyond (HS&B) longitudinal survey was first administered in 1980 to a stratified, nationally representative sample of approximately 30,000 high school sophomores and 28,000 high school seniors from more than 1,000 high schools. Follow-up surveys were administered in 1982, 1984, 1986, and 1992. Approximately 30,000 individuals who were sophomores in 1980 participated in the First Follow-up in 1982. As a component of this survey, transcripts were collected, with a total of 15,941 transcripts obtained. 11,195 sophomores in 1980 had graduated in 1982 and had complete transcripts available in the file. Excluded students were students who dropped out of school, were still working for their diploma, or who did not have complete transcript data. For all transcripts and samples, a course identification code number, based on the Classification of Secondary School Courses (CSSC), was assigned to each course taken.
by a student. Courses were further classified into subject (e.g., math) and program (e.g.,
amademic) areas using a 1998 revision of the CSSC (Bradby, D. and Hoachlander, E.G.
Center for Education Statistics).

National Education Longitudinal Study of 1988

The National Education Longitudinal Study of 1988 (NELS:88) began with a
cohort of students who were in the 8th grade (about 13 years old) in 1988. Data were
collected not only from students but also from their parents, teachers, and high school
principals; high school transcripts were also collected. In addition, tests in reading,
mathematics, science, and history were administered during the base year (1988) as well
as during the first and second follow-ups (1990 and 1992). Students were also surveyed
in 1994, two years after their expected year of high school graduation.

The NELS:88 surveys provide an opportunity to examine a number of issues
pertinent to transitions, including: students' academic growth over time, the transition
from eighth-grade to high school, the process of dropping out of school, school
experiences and academic performance of minority students, access to and choice of
postsecondary schools, transitions to postsecondary education and work, and trend
analyses with earlier longitudinal surveys.

The NELS:88 sample was selected from a universe of approximately 40,000
public and private schools that include grade 8. About 1,000 schools were sampled, and
about 24 students were randomly selected from each of these schools. Additional Asian

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and Hispanic students were sampled, bringing the total original sample to about 25,000 students.

Surveys Beginning with the Postsecondary Experience

Beginning Post-Secondary Student Longitudinal Study

The Beginning Postsecondary Student Longitudinal Study (BPS) recognized the increasing diversity of postsecondary students by focusing on a cohort of individuals who were starting their postsecondary education in the fall of 1989. Using a cohort of students enrolling in postsecondary education rather than a high school cohort allows this study to track a representative sample of postsecondary students, rather than just those who enrolled in postsecondary education immediately after graduating from high school. In addition to examining the persistence, progress, and attainment of students throughout their postsecondary experiences, BPS also followed this cohort into graduate education and the workforce.

The BPS draws its initial sample from a cross-sectional postsecondary survey, the National Postsecondary Student Aid Study (NPSAS). About 8,000 students in the NPSAS sample who were beginning their postsecondary education in 1990 were followed in 1992 and 1994. The first follow-up described the experiences of students while in school, and their transitions from postsecondary education into the labor force; family formation was also included in the survey. By the second follow-up in 1994, many of those in the sample had completed a bachelor's degree, allowing for an examination of their initial entry into either graduate education or the workforce.
A second BPS cohort was selected from the 1996 NPSAS sample. These students, who began their postsecondary education in the 1995-96 academic year, were recontacted for the first time in the spring of 1998.

**Baccalaureate and Beyond**

The Baccalaureate and Beyond (B&B) cohort consisted of students who completed a bachelor's degree in 1992-93. At that time, these students were asked about their undergraduate education experiences, as well as their future employment and education expectations. The first follow-up occurred in 1994 and asked about job search activities after graduation, and education and employment experiences since receiving a baccalaureate degree. This survey over-sampled individuals who expressed an interest in becoming teachers; this group of respondents was asked additional questions about their interests and (if relevant) their teaching jobs. Another follow-up in 1997 gathered data on education, employment, and other experiences.

Approximately 11,000 students who completed their degrees in the 1992-93 academic year were included in the first B&B survey. Because this sample was drawn from the National Postsecondary Student Aid Study (NPSAS), data were also available for 8,000 parents of these students in the base year survey. Postsecondary transcripts were collected as well.

**National Post-Secondary Student Aid Study**

The NPSAS collects information from students enrolled in the full-range of U.S. postsecondary education institutions (e.g., less-than-two-year institutions, community colleges, four-year colleges, and major universities). While its focus is primarily on how students pay for postsecondary education, the NPSAS collects data on a wide range of
student demographics, family income, education experiences and parental influences. As noted earlier, NPSAS also forms the base for both the Baccalaureate and Beyond and Beginning Postsecondary Students Longitudinal Studies.

The first NPSAS was conducted during the 1986-87 academic year with a sample of about 60,000 students. A subsample of parents was also surveyed and information from institutional records was collected. Additional NPSAS surveys with new samples were conducted in 1989-90, 1992-93, 1995-96, and 1999-2000.

Recent College Graduate Study

The Recent College Graduates Study was designed to analyze the occupational outcomes and educational experiences of bachelor's and master's degree recipients who graduated from colleges and universities in the continental U.S. The survey was conducted in 1976, 1978, 1981, 1985, 1987 and 1991. The longitudinal Baccalaureate and Beyond survey, described above, replaced this survey.
BIBLIOGRAPHY


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