DOCUMENT RESUME

ED 363 455 PS 021 981

TITLE	Reaching the Goals. Goal 2: High School Completion.
INSTITUTION	Office of Educational Research and Improvement (ED), Washington, DC. Programs for the Improvement of Practice.
REPORT NO	ISBN-0-16-042930-7; PIP-93-1018
PUB DATE	Oct 93
NOTE	43p.; Prepared by the Goal 2 Workgroup.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328 (Stock No. 065-000-00613-8, $2.75).
PUB TYPE	Reports - Descriptive (141) -- Reports - Research/Technical (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Disabilities; *Dropout Characteristics; *Dropout Prevention; *Dropout Research; Educational Change; Graduation; High Schools; *High School Students; Influences; Intervention; Minority Groups; Student Needs
IDENTIFIERS	*National Education Goals 1990

ABSTRACT

The second of the National Education Goals, adopted following a summit meeting held in 1989 between the U.S. President and 50 governors, states that, by the year 2000, the high school graduation rate will increase to at least 90%. This document, an abridged version of a report produced by a work group on school completion, is an examination of what will be needed to achieve that goal. An executive summary notes the need for greater emphasis on retaining students whose background generally does not indicate a risk of dropping out, but who, despite that fact, constitute the majority of dropouts. It highlights four critical issues of policy and practice in light of current education reforms. The issues are: (1) the consequences for graduation rates of the trend to develop national standards; (2) the rationalization of state graduation requirements; (3) the educational implications of incentives to raise the academic motivation and effort of students; and (4) the development and testing of theory-based studies of school persistence and retention. The report indicates how many additional students would need to complete high school to achieve the 90% goal, and identifies characteristics of dropouts. Existing policies at the national, state, school, and local levels as they affect students are discussed; family, school, and social environments that exert influence are also examined. The report then notes four areas still in need of research, namely: what is really known about mainstream dropouts? what are the factors that lead certain groups to drop out at greater rates than those in the mainstream? what are the consequences of completing a GED rather than a regular high school diploma? and to what extent does the lure of adolescent employment and the challenge of teenage parenting influence the prospects for higher graduation rates? Finally, the report calls for a move toward developing and advancing theoretical concepts that treat retention, graduation and completion as consequences of a dynamic interaction of such variables as student characteristics, school context, occupational prospects, and cultural influences, and examines some directions a national research agenda might take. Contains 49 references. (HTH)

ED 363 455

Reaching The Goals

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

GOAL 2

High School Completion

BEST COPY AVAILABLE

Reaching The Goals

GOAL 2

High School Completion

Prepared by the Goal 2 Work Group
Office of Educational Research and Improvement
U.S. Department of Education

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

Fund for the Improvement and Reform of Schools and Teaching
Janice K. Anderson
Interim Director

Library Programs
Ray Fry
Director

National Center for Education Statistics
Emerson J. Elliott
Commissioner

Office of Research
Joseph C. Conaty
Acting Director

Programs for the Improvement of Practice
Eve M. Bither
Director

October 1993

OERI Goal 2 Work Group
Donald Fork, Cochair
Mary Frase
René Gonzalez
Tommy Tomlinson, Cochair

OERI Work Group Coordinator
Hunter Moorman

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-042930-7

Foreword

In determining sound education practices for their schools and communities, policymakers, educators, and parents must often find their way through a maze of conventions, recommendations, and theories. Sometimes new research seems to conflict with established practice, with older research, or even with other current research. Does education research allow us to say anything with confidence about what works? In fact, while substantial gaps remain, we do know a great deal about what is effective in education.

In 1989, the President and the nation's 50 governors held an historic education summit that culminated in the adoption of six National Education Goals. These six broad Goals serve as a framework for much of the current reform movement. In order to help all those who are critical to its success—from parents to national policymakers—the Office of Educational Research and Improvement (OERI) has produced *Reaching the Goals*, a series of publications describing what we know from research that applies to each Goal, as well as the limits of that knowledge.

Each publication is the result of a deliberate process guided by task forces composed of talented individuals from various programs and offices within OERI including the National Center for Education Statistics, the Office of Research, Programs for the Improvement of Practice, Fund for the Improvement and Reform of Schools and Teaching, and Library Programs. Each task force was charged with assessing the state of research for a particular Goal and developing a research and dissemination agenda for OERI for that Goal. Lengthier technical documents that formed the basis for these publications and include all relevant research citations are available from OERI.

If we are to succeed in improving education and training to meet our ambitious National Education Goals, research must inform and encourage the development of sound policies and practices. By making available in a clear and understandable format the best research we have, these publications can be invaluable to those who are serious about reform.

To obtain copies of the technical report, which formed the basis of this publication and which includes all relevant research citations, contact OERI, Dept. EIB, 555 New Jersey Avenue NW, Washington, DC 20208–5641.

Acknowledgments

This report was prepared by the OERI Goal 2 Work Group, cochaired by Donald Fork and Tommy Tomlinson. It is an abridged version of the group's technical report on school completion. The work group shared the overall task of collecting information and structuring the technical report. Tommy Tomlinson and Mary Frase wrote most sections of the report. Aaron Pallas of Michigan State University and Gary Wehlage of the University of Wisconsin-Madison made valuable contributions to the discussion of research and theory bearing on dropout prevention and school completion.

Several colleagues outside of OERI provided review and critique of the technical report, including Janet Baldwin, Philip Cusick, Sandra Graham, Fred Newmann, Aaron Pallas, Jay Smink, and Gary Wehlage.

Contents

Executive Summary

While the national goal to achieve a 90 percent graduation rate is plausible, its realization will require some adjustment in the nation's priorities for dropout prevention and a more sophisticated conception of the dropout problem.

At this time, the rate for school completion exceeds 85 percent for Asians and whites and is about 80 percent for blacks. The graduation and completion rates for Hispanics and American Indians fall significantly below those of blacks, whites, and Asians. Nevertheless, the present trend augurs continuing improvement; during the past 12 years the overall national dropout rate for 16- to 24-year-olds has fallen from 14.1 percent to 11.0 percent.

While most of the nation's attention has been directed at the identification, support, and retention of at-risk students, it remains true that the majority of dropouts are not those who seem to be most at risk. That is, although the dropout rate for blacks is 50 percent higher than for whites, and twice as high for Hispanics, 66 percent of the actual dropouts are white, while just 17 percent are black and 13 percent are Hispanic. Moreover, most dropouts are not from broken homes, not poor, and not pregnant. Consequently, if our graduation rate is to climb to 90 percent, it will have to be achieved by putting greater emphasis on retaining students whose background and behavior are not generally thought of as the defining characteristics of students who drop out.

Most studies of dropouts have aimed to establish the social and personal characteristics of the dropouts themselves, usually with the purpose of developing a profile of predictors that would permit early identification and "treatment" of students who are at risk of leaving prematurely. To date, the identification effort has met with some success, but claims for the success of dropout prevention programs are difficult to document.

Many questions about current policies and practice remain, especially in light of the direction that current education reforms are taking. Four issues in particular require attention:

- *The consequences for graduation rates of the trend to develop national standards.* Some say higher standards will force more students to fail. Others say graduation rates will rise because students at every level of ability will be better prepared. There is also a concern that all students cannot meet the same high standards.

This concern is answered, in part, by those who believe that even if everyone cannot meet the standards, those who fall short will at least be doing better than before. These views require careful empirical examination.

- *The rationalization of state graduation requirements.* Because the states vary greatly in their graduation requirements, there are substantial differences in the academic meaning of diplomas from state to state. National standards will exert pressure to reconcile these differences. Until this happens, however, there will be uncertainty about the meaning of states' diplomas as well as about their actual rates of high school graduation. Since national standards are to be voluntary, efforts to establish uniformity among the states' definitions of graduation requirements and to create nationwide standards may be necessary to establish consistent and valid measures of graduation.

- *The educational implications of incentives to raise the academic motivation and effort of students.* Incentive programs have been suggested as a method to engage students who are otherwise uninvolved in learning. Many states and business and educational institutions have offered a variety of incentives to elementary and secondary students aimed at boosting their levels of effort and achievement. These programs range from guaranteeing postsecondary tuition to withholding privileges and grade promotions. Both have long- and short-term consequences for students. While the appeal of incentives is substantial, their present design is rudimentary and naive, and their consequences largely unknown. They deserve careful study and better design based on the large and still growing literature on human motivation.

- *The development and testing of theory-based studies of school persistence and retention.* The characteristics of students who are most likely to drop out and the development of dropout prevention programs intended to reduce their rate of exit dominate current research. We know well that the invidious effects of poverty, broken families, illegitimacy, and drugs can pose great obstacles to learning and graduation. But we know less about how these barriers can be overcome or how schools and society can help students resist their effects. The prospects for higher graduation rates would be increased if educators knew more about what motivates students to want to learn. Toward this end, the study of such concepts as social capital;

social bonding; orientation toward the future; perceived opportunity, fairness, and caring; and "authentic" school work would contribute to a better grasp of how and why students pursue, or can be helped to pursue, their education.

Introduction: Raising Graduation Rates

One of the clearest and most readily quantifiable of the National Education Goals is Goal 2—to achieve a 90 percent graduation rate from the nation's high schools. While there is a lot that we know about what determines whether or not a student will graduate from high school, there's still much to be discovered. A number of avenues open for future research show promise of yielding the information we need to reach the graduation rate goal. The ideal objective is for all students to possess not just the diploma but also the skills, knowledge, and attitudes necessary for participating productively in society. Many graduates presently do not. Still others drop out of high school. In both instances, students have disengaged themselves from learning. We must recapture the interest of disaffected students if we are going to boost the high school completion rate to 90 percent.

Policymakers often ask: How many additional students would have to complete high school each year in order to achieve a 90 percent graduation rate? In 1992, there would have had to be approximately 440,000 more high school completers to meet the 90 percent goal for 19- and 20-year-olds (table 1).

Table 1.—Number of additional high school completers needed in order to achieve a 90 percent high school completion rate for 19- to 20-year-olds: 1992

19- to 20-year-old age group (in thousands)	Completion rate	Increase in the number of 19- to 20-year-olds who had completed high school needed to meet 90% Goal (in thousands)
6,559	83.3%	439

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1992* (1993a).

Defining Dropouts: A Statistical Portrait

There are three commonly used types of dropout rates:

- *Event dropout rates* measure the proportion of students who drop out in a single year without completing high school;
- *Status dropout rates* measure the proportion of the population that has not completed high school and is not enrolled at one point in time, regardless of when they dropped out; and
- *Cohort dropout rates* measure what happens to a single group (or cohort) of students over a period of time.

The most recent estimate for each type of dropout rate is:

—Event rate, grades 10–12	4.4 percent
—Status rate, ages 16–24	11.0 percent
—Cohort rate between 8th and 10th grades, 1988 eighth-graders	6.8 percent
—Cohort rate between 10th and 12th grades:	
1980 sophomores	10.9 percent
1990 sophomores	6.2 percent

While the rates appear low, the actual numbers are substantial. The event rate for grades 10–12 at 4.4 percent translates to an estimated 383,000 students who dropped out of school between October 1991 and October 1992. The status dropout rate represents approximately 3.4 million dropouts in October 1992. Still, the trends in dropout rates over the past decade are encouraging. For example, status dropout rates declined from 14.1 percent in 1980 to 11.0 percent in 1992.

Who Drops Out?

Background Characteristics

Dropout rates are related to a variety of individual and family demographic and socioeconomic characteristics. In general, dropout rates are higher for minority students and for those from disadvantaged backgrounds.

Dropout rates are higher for blacks and Hispanics than for whites. When blacks and whites from similar social backgrounds are compared, however, dropout rates for blacks are not higher, and in some cases may be lower, than those for whites. Rates for American Indians and Alaskan Natives are quite high, while those for Asian students are very low (table 2).

In recent years dropout rates for males and females have been similar, although in earlier years dropout rates for males tended to be higher than those for females.

Dropout rates are higher for students from low socioeconomic backgrounds, single-parent families, and non-English family backgrounds (table 2). Students whose parents or siblings were dropouts are themselves more likely to drop out. The same is true for those who marry and have children before graduating from high school.

Location

The dropout rate is greater in cities than in suburbs and nonmetropolitan areas. Dropping out is most prevalent in the West and South.

School Experiences

A student's previous success in and commitment to school are related to the likelihood of dropping out. Those with poor grades, who have repeated a grade, who are overage for their grade, or who are frequently absent are more likely to become dropouts than other students.

Composition of Dropouts

People are often surprised to discover that most of the dropouts come from groups who are not usually thought to be at risk. For example, table 2 shows that of the dropouts from the sophomore class of 1980:

—66 percent were white;
—87 percent had an English-language home background;
—68 percent came from two-parent families;
—42 percent attended suburban high schools;
—80 percent had neither children nor spouses;
—60 percent had C averages or better; and
—71 percent had never repeated a grade.

Table 2.—Cohort dropout rate and proportion of total dropouts for 1980 sophomores by socio-demographic and geographic characteristics

Characteristic	Cohort dropout rate (percent)	Proportion of total dropouts[1]
Total	17.3	100.0
Sex		
Male	19.3	55.5
Female	15.2	44.5
Race/ethnicity		
White	14.8	65.7
Black	22.2	17.4
Hispanic	27.9	13.1
Asian	8.2	.6
Am. Indian/Alaskan Native	35.5	3.1
Home language background[2]		
Non-English only	20.1	1.9
Non-English predominant	20.8	3.5
English predominant	12.7	7.9
English only	14.5	86.7
Socioeconomic status[2]		
Highest quartile	6.6	11.6
Second quartile	10.2	21.0
Third quartile	14.3	27.9
Lowest quartile	22.1	39.5
Family structure[2]		
Both parents present	12.3	68.2
One parent present	21.6	26.7
Other	32.6	5.1
Region		
Northeast	13.7	17.6
Midwest	14.8	24.1
South	19.5	36.8
West	21.7	21.5
Metropolitan status		
Urban	24.5	30.7
Suburban	15.1	41.7
Rural	15.6	27.6

[1]Proportion of dropouts with nonmissing data.

[2]For these variables, 20–27 percent of dropouts have missing data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond survey, sophomore cohort (1989).

Two factors contribute to this pattern. First, the total number of students in at-risk categories is relatively small. That is, while the dropout rate is higher for blacks (22 percent) and Hispanics (28 percent) than for whites (15 percent), because whites compose over two-thirds of the total population, they contribute the greater number of dropouts. Second, research has found that most at-risk students do not drop out. For example, despite their higher dropout rate, most blacks (78 percent) and Hispanics (72 percent) graduate from high school.

Reasons for Dropping Out

Dropping out of school is a complicated and multifaceted phenomenon. Researchers find that dropping out is a process, not an event. It is relatively rare for students to make a snap judgment to leave school. The reasons students commonly offer for leaving school—for example, low grades, inability to get along, working, and pregnancy—may not be the true causes but rationalizations or simplifications of more complex circumstances.

Returning to School

Dropping out of high school is not an irrevocable action. The problem of dropouts in this country would be even greater if a substantial share of them did not later complete high school, often within a short period of time after dropping out. Nearly half (46 percent) of the dropouts from the sophomore class of 1980 had completed high school by 1986, that is, within 4 years of their expected graduation date. Approximately two-thirds of dropouts who later complete high school do so by obtaining some sort of equivalency credential. In 1992, about 465,000 General Education Development (GED) credentials were awarded in the United States, including the territories.

The characteristics of dropouts who later earn a diploma or an equivalency certificate tend to resemble those of students who never dropped out. The same characteristics that differentiate dropouts from other students also distinguish dropouts who return and complete their education from dropouts who do not return to school.

The earlier the grade from which a student drops out of high school, the less likely it is that the student will later complete high school. Furthermore, the earlier the grade at the time of leaving school, the more likely it is that a dropout who does later complete his or her education will do so by means of an equivalency certificate.

As a group, Asian dropouts are most likely to return and complete high school, while American Indian and Hispanic dropouts are least likely to return and finish. Black and white dropouts do not differ in their completion rates in the first few years after dropping out of high school. Dropouts from high socioeconomic backgrounds or those with high grades are more likely to return than those from low socioeconomic status families or with poor grades.

What Do We Know?

To fully comprehend the dynamic process that determines whether or not students stay in school requires consideration of the students and the demands in their lives, of the schools and their local policies and practices, and of the state and federal policies that shape and reflect the social and educational views of the nation.

National and State Policies

Over the past decade, school reform has occurred largely at the state level and has been concerned with changes in school practices. Recently, attention has also turned to the development of national achievement standards and to state policies designed to alter the academic motivation of the students themselves. Examples of state policies that aim to coerce attendance include West Virginia's attempt to tie holding a driver's license to staying in school and Wisconsin's Learnfare program, which makes welfare support contingent on school attendance. Taken together, these policies propose to persuade all students, including the most alienated, to stay in school and work harder in order to meet national standards of (higher) achievement.

School Reform Movement

Course requirements. In the early 1980s, a number of reports decried the condition of American education, most notably *A Nation at Risk*. These reports typically called for higher standards for students in the academic content of courses, more time and better use of it for school work, and higher student achievement. Some educators thought that higher standards might improve the academic achievement of potential dropouts. Others, however, asserted that higher standards might force marginal students to leave school prematurely, especially in the absence of specific strategies to help them meet the new standards.

Nevertheless, many states increased the requirements for the number and level of academic courses needed to graduate from high school. Although research has been skimpy, some researchers found that students in schools where the achievement levels are low increased the number of academic subjects they took during the

1980s, especially in science. Overall, the increase was in the middle range of high school courses, that is, neither remedial nor advanced.

As yet, though, there are no parallel studies to show how increased state graduation requirements influence the likelihood that low-achieving students will complete high school; nor do we know the extent to which state-to-state differences in such requirements affect state-level comparisons of school dropout and graduation rates.

Varying state graduation requirements. What it means to be a high school graduate is not the same in every state because state requirements vary considerably. In addition, they change their requirements from time to time. Differences among states might include whether they require competency tests and how they categorize students who do not complete all the graduation requirements but do complete 12 years of school. Inconsistencies can also be found in how special education students are handled. Some states give them regular diplomas if they complete a personally prescribed course of study (Individualized Education Plan). Other states may give such students an alternative award, such as a certificate of completion or of attendance.

These state-to-state differences complicate the monitoring of the national graduation rate as well as the comparison of state-to-state rates. For instance, what does a 90 percent graduation rate mean when some states have much more stringent requirements than others? Comparisons over time are also difficult to make, particularly in an era of reform when states have been increasing the rigor of their graduation requirements. Differences among the states also exist with respect to equivalency credentials and regular diplomas. States vary in their requirements for awarding a GED; they even differ in who can take the GED exam. Furthermore, each state sets its own criteria as to what constitutes a passing score on the GED exam, and there is considerable variation in such criteria.

Competency tests. At the same time, many states have implemented "high-stakes" tests, so called because the test results play a significant role in establishing the future educational and occupational prospects of the students. For example, some have argued that failing to achieve a passing grade on a minimum competency test or exit test may deprive an otherwise qualified student of a high school diploma. In one study of the effects of minimum competency tests on school dropouts, counselors, test coordinators, and principals were interviewed. It was found that many educators believed that minimum competency tests were so watered-down that they did not serve as a barrier even for

low-achieving students. At the same time, these educators acknowledged that they did not know whether or not minimum competency tests tended to push students out of school prior to completion. Many students had negative opinions about such tests. Over and above the influence of their school grades and family background, students who had failed a required graduation test were more likely than those who passed to express doubts about their own chances of graduating from high school.

It is worth noting, however, that other observers conclude that minimum competency testing contributed significantly to the improvement in academic achievement of minority and disadvantaged children during the 1980s. To the extent that increased average achievement reduces the number of students who would later drop out because of academic failure, and to the extent that minimum competency tests have contributed to higher achievement, those tests would be classified as a positive influence on school holding power.

Nonetheless, direct evidence on the effects of high-stakes tests and other manifestations of the quest for higher standards on the likelihood of dropping out of school remains a pressing priority for future research.

Incentive Programs

A number of initiatives have been developed that are intended to strengthen the connections between students' experiences in elementary and, especially, secondary school, and their lives outside of school. Some of these initiatives rely on rewards for students who perform well in school. Others rely on punishments for failing to attend regularly or to perform well in school. Most are couched in terms of future rewards for the student following the accumulation of qualifying credits, for example, grades, attendance, and other signs of desirable behavior. Sanctions are more likely to be framed in terms of the here and now, since the failure to perform results in immediate negative consequences, for example, loss of eligibility to engage in sports, or loss of a driver's license or even welfare benefits.

Rewards. A number of program strategies have been conceived that presume that disadvantaged students will be willing to delay gratification and continue to work for a payoff that will take place several years in the future—access to college, for instance. Perhaps the best-known example is the "I Have a Dream" program initiated by philanthropist Eugene Lang. Lang and his imitators have

"adopted" classes of students, typically in the elementary and middle grades, and promised to cover certain college costs if these students dedicate themselves to graduating from high school. Although there has been no credible evaluation of Lang's or similar initiatives, a large variety of similar programs have been offered to disadvantaged children in return for effort, perseverance, and achievement.

Some observers attribute the relatively poor academic performance of work-bound high school students to a failure of employers to require more from students than a high school diploma. For example, employers do not hire new graduates for entry-level jobs on the basis of the grades they attained or the content of the courses they took during high school. Instead, the diploma stands as testament to certain desirable traits (persistence, civility, punctuality), and only secondarily as evidence of ability or academic competence. As a remedy, many leading educators have proposed a credentialing process to encourage employers to reward high-achieving students with better jobs and wages based on the quality of the student's record. The assumption is that if students believed their grades and the quality of their courses would determine their entry-level salary as well as the quality or desirability of the job they are offered, they would study harder and do better in school. They would also be less likely to drop out, the reasoning goes. Little is known about the plausibility of this assumption or of the likely effects of such incentive programs.

Sanctions. Several states exact a penalty for dropping out of school. Two of the most prominent of these penalties are Wisconsin's Learnfare program that reduces welfare benefits and West Virginia's driver's license revocation law.

The Wisconsin Learnfare program imposes penalties on families receiving Aid to Families with Dependent Children whose teenage members fail to attend school regularly. Family benefits are reduced when these teenagers accrue more than two unexcused absences in a month. Exemptions are allowed for good-cause absences. The average penalty in 1989 was about $100 per month. With only the initial year's administrative data to go on, officials in the Wisconsin Department of Health and Social Services disagree on whether or not Learnfare works, and the evidence to date is inconclusive. Further evaluation is needed of the impact that Wisconsin's Learnfare program and similar programs adopted by other states have on a family's welfare as well as their children's school attendance.

West Virginia's law revokes the driver's licenses of dropouts under the age of 18 and of still-enrolled students who exhibit high rates of

absenteeism during a single semester. A number of other states have passed similar legislation. Analysis of West Virginia dropout rates from 1985 to 1990 showed no evidence of reduced dropout rates for the state in the first 2 school years when the law was in effect, compared to the 4 previous school years. Researchers suggest that this is because the law did not affect most dropouts—they may have had no driver's license to begin with or they were already at least 18 years old and therefore exempt from the sanction. Researchers argue that if incentives are to work, they must offer consequences that warrant the student's serious attention.

In summary, we still have little evidence about the effectiveness of such state and national initiatives as the school reform movement (particularly raising standards) and rewards and sanctions intended to increase the likelihood that young people will stay in school. Despite their growing popularity, few investigators have analyzed how these policies might motivate students to improve their performance or to stay in school.

Schools and Local Policies

Another area researchers have examined is how local administrative policies affect a student's decision to stay in school or to drop out. Among these policies are school organization and retention in grade.

School Organization

One group of researchers investigated whether high school organization had any effect on student outcomes, including motivation and academic achievement. They noted a handful of studies that examined the influence of school organization on dropping out. One study found dropouts were far less likely to believe their teachers were interested in them, and far more likely to perceive school discipline as unfair or ineffective than students who stayed in school. Another study found that schools in which the staff shared values, experienced common activities and social interaction patterns, and embraced an ethos of caring, had lower dropout rates, less student misbehavior, and higher staff morale.

Looking at the impact of school organization on dropping out thus appears to be a fruitful line of study. But only a handful of researchers have explored the connection between the ways schools

are organized and how well students persist in those schools. In addition, the measures used to assess school organization are far from ideal.

Retention in Grade

Probably the school-level policy that has received the most attention is retention in grade. Previous research on dropouts has shown that students who are overage for their grade or who have been retained in grade at least once are more likely to drop out than those who are not overage or who have not been retained. However, it is not clear what the nature of this relationship is. Did being retained in grade or being overage increase the likelihood of such students dropping out or were these students who would have been more likely to drop out even if they had not been retained?

Untangling the nature of this relationship is particularly important in light of several other developments. National data reveal an upward trend in the percentage of children who are above the modal age for their grade. Furthermore, black and Hispanic children are more likely to be above modal age for their grade than are white children. There is also the perception that two other phenomena are increasing: the proportion of children, particularly boys, being retained in kindergarten and first grade; and the proportion of children—again, more frequently boys—whose initial enrollment in school is delayed beyond the age at which they are eligible to start.

Few retention studies follow students throughout their school careers, especially studies beginning in the early elementary grades where grade retention is most likely to occur. Nonetheless, research suggests that students who are retained in grade in fact are more likely to drop out of school than similar students who are not retained.

Other school-level policies and practices that warrant further attention because of their consequences for potential dropouts include: grouping practices and alternatives to tracking; discipline policies; student assessment and evaluation procedures; and other practices that aim to be "responsive" to student problems, such as alternative curricula.

Students and Their Environment

Individual differences or changes occurring in the lives of individual students may affect the likelihood of their dropping out or returning to school. Examples include individual student academic performance, motivation and personality, family background, and entry into adult work and family roles.

Family Background

It has long been recognized that children from disadvantaged family backgrounds are more likely to drop out of school than children from more privileged backgrounds. But the reasons for this persistent finding have been unclear. Recent research has attempted to illuminate the ways in which family background affects the educational experiences of children and youth who are at risk of dropping out of school. Still further work in this area is needed.

Researchers have examined the claim that children in single-parent families are less likely to graduate from high school or obtain postsecondary schooling than children who grow up with both parents. One study explored the possibility that children who live with single parents and step-parents receive less encouragement and supervision from their parents than children in two-parent families and that these differences in parental practices help to explain the lower graduation rates of children in single-parent families. They found that children from single-parent families less often report that their parents expect them to obtain more schooling, monitor their schoolwork, or closely supervise their activities than do children who live with both parents. Yet, these differences account for surprisingly little of the gap in graduation rates between children from intact and nonintact families.

Longitudinal Studies

Among the most promising approaches to understanding the causes and consequences of leaving school before graduation is the study of children's paths through the education system and beyond. From long-term studies of children's school careers we can begin to see when critical periods emerge that change the course of children's lives. Such research thus may help identify potential school dropouts early and suggest specific school initiatives to anticipate difficult times in school for certain children.

The few studies that track children over many years suggest that the problems of future dropouts have their roots early in the students' school careers. For example, a recent study by Ensminger and Slusarcick examined the paths to graduation or dropping out taken by more than 1,200 black first-graders in Chicago. They found that academic performance and aggressive behavior in the first grade were both good predictors of whether these children eventually graduated or dropped out, as were some other factors, such as family poverty and the mother's education. They concluded:

> Early aggressive behavior may lead to confrontations with teachers and other school authority figures. If this behavior is not altered by the teacher or by the child, it may spiral into more and more frequent problems and confrontations. The child increasingly becomes alienated from school. This alienation reinforces the child's poor academic performance, involvement in such problem behaviors as drug use and delinquency as the child becomes an adolescent, and membership in peer groups that do not value academic success. From this perspective, then, the design of early prevention and intervention programs that are targeted at children with aggressive behavior and their teachers is an important strategy.

Longitudinal studies also can help chart the various education and career trajectories of mainstream as well as minority youth who do leave school. In particular, we know that many students who drop out of school eventually return to an educational setting, either their original school or some alternative. Yet we know very little about the lives of such youth in the time between when they left and when they return. Even more importantly, we lack a clear understanding of the personal characteristics of returning students, and what leads them to return to school. If the policy goal is to create school environments that are attractive to dropouts and promote dropout recovery, we need better information on both the dropouts who choose to return and those who do not.

School Influences

Researchers have noted three key academic influences on students within schools that may determine whether they stay in school or not: difficulty of the academic program, a lack of challenging material and low standards, and the view by students that the academic program is simply irrelevant to their lives. School policies and practices thus may attempt to promote engagement by revising academic standards of the school curriculum, developing students'

skills and abilities through school activities, and making academic programs meaningful to the lives of students and relevant to their futures.

Researchers have also noted three nonacademic influences on students within schools that affect student engagement and dropping out. First, some students have weak connections to adults in the school and may come to feel that no one in the school cares about them. Second, some students may have weak connections to peers in the school and may shift their attention to friends who are already out of school. Third, some students may have weak connections to the school as an institution and may feel powerless and unsure of what is expected of them. The impersonality of the large urban high school is an example of a nonacademic dimension to life in schools that is frequently described as leading to withdrawal. Therefore, schools may want to consider adopting policies and practices designed to strengthen students' bonds to school.

Social Influences

Students' lives outside of school may have as much to do with whether they persist in school as their experiences in the school. The image of young women who leave school when they become pregnant or of young men and women who drop out of school to support their families points attention to students' lives outside of school. Problems of substance abuse, family violence and abuse, and gang membership are examples of other out-of-school factors that schools may attempt to address through their policies and programs.

Peer culture has much to say about the attitudes students take to school with them. In general, students believe that doing well in school is desirable and graduating is important. Yet some peer crowds regard learning and the effort it requires with contempt, and academically motivated students may face a social climate that punishes them for working hard and doing well. It isn't clear to what degree the climate established by such views and the behavior that accompanies them contribute to underachievement and dropping out. However, the data suggest they are particularly influential in schools that primarily serve disadvantaged students.

What Do We Need to Know?

The high school completion rates for certain traditionally disadvantaged groups, in particular Hispanics and American Indians, are substantially lower than the rates for both black and white students from similar economic and social backgrounds. However, even a dramatic improvement in the graduation rates of those groups would have little impact on the nation's progress toward meeting Goal 2 because these groups are relatively small. That is, because 75 percent of all students are white, the absolute number of white dropouts far exceeds the number from traditionally disadvantaged groups even though their dropout rates are three or four times higher. Consequently, if we are to make substantial progress toward a high school graduation rate of 90 percent, the dropout rate for "mainstream" white students must be substantially reduced. At the same time, we must expand our efforts to reduce the gap in completion rates between mainstream and disadvantaged minority groups.

This situation suggests four questions to be explored by research:

- What do we know about mainstream dropouts? How can we explain the large numbers of youngsters who, without seeming disadvantaged, still fail to complete high school? Conversely, why do so many more of their peers succeed in completing high school?
- What are the factors that lead Hispanics, American Indians, and students with disabilities to leave school at greater rates than those in the mainstream?
- What are the consequences of completing a GED rather than a regular high school diploma?
- To what extent does the lure of adolescent employment and the challenge of teenage parenting influence the prospects for higher graduation rates?

Mainstream Dropouts

As previously noted, one of the most evident but unremarked features of the dropout population is that two-thirds of future dropouts do not appear to be at risk by the usual criteria. They do

not possess the social, economic, ethnic, or racial characteristics that are typically associated with high dropout rates. Yet, the majority of dropout research and prevention efforts are aimed at students with at-risk characteristics—namely, minority students from low-income families, students from single-parent families, and the like, as well as students who abuse drugs, and girls who become pregnant. The aim is not off target since the at-risk population as well as those who drop out consist disproportionately of minority and low-income youths. Yet, a significant national reduction in the number of dropouts and commensurate increases in graduation rates will occur only when programs effectively address the "hidden" majority—the so-called "mainstream" dropouts. Accordingly, it would be highly desirable to point additional research toward them and the aspects of school and life that incline them to drop out, together with the identifying signs that signal their imminent departure. Attention should also be paid to identifying programs and experiences that would keep these young people in school or encourage them to return.

A related subject for study involves the cumulative impact of at-risk factors on the likelihood of dropping out and completing school. The issue has two dimensions. The first is related to the likelihood of dropping out. To what extent does the probability of dropping out rise as the number of at-risk factors rises, and which combinations of at-risk factors appear to be associated with the highest dropout rates? The second dimension concerns the characteristics of dropouts as a group. What proportion of dropouts are characterized by two or more, one, or no at-risk factors? It may be the case that most dropouts do exhibit at least one risk factor, but the factors themselves may differ.

Traditionally Disadvantaged Groups

Minorities

The dropout rates of traditionally disadvantaged groups, especially Hispanics and American Indians, remain far higher than the rates of the remainder of children and youth in the United States. Equally dismaying, while overall dropout rates in recent years have declined, Hispanic dropout rates have not been falling. These high rates are particularly troubling in light of the growing proportion of Hispanics in the population and the relatively young age of the Hispanic

population. In addition, Hispanic dropouts, on average, complete fewer years of schooling than do non-Hispanic dropouts. About 25 percent of Hispanic dropouts ages 16 to 24 in 1989 had completed 6 or fewer years of schooling, while only 5 percent of non-Hispanic dropouts had completed so little schooling. Possible reasons for these differentials include two obvious features of this group: language background and immigrant status. Learning English while mastering the school curriculum poses a significant barrier not faced by students whose native language is English. Moreover, there is a strong, but undocumented, suspicion that a substantial share of immigrant Hispanics may never have attended schools in the United States at all, and thus their lack of education does not reflect the performance of our schools. However, even among those born in this country, dropout rates for Hispanics are more than twice those for non-Hispanics. In addition, the Hispanic population is quite diverse, and there are substantial differences among Hispanic subgroups in dropout and completion rates that warrant further study.

Examination of the educational status of American Indians reveals a picture even more dispiriting than that for Hispanics. Claims of dropout rates from reservation schools that approach 50 percent, drug and alcohol abuse, broken families, poor schools, and poverty all conspire to depress the prospects of American Indian students. Little is known about the kind and quality of educational experience offered by Bureau of Indian Affairs schools or the nature of educational programs that would help promote school retention. The number of students involved is comparatively low; so low, in fact, that conventional education statistics do not report their status. Consequently, a productive first step would be to boost the size of the sample of American Indians in national surveys as well as to develop other research projects for the American Indian population.

Students with Disabilities

A recent examination of the status of special education students provides a picture of the characteristics and educational prospects of students with disabilities. Prominent among the findings was evidence that the dropout rates of students with disabilities is almost 20 percent higher than for students in the general population.

The dropout rates also vary widely according to the nature of the disability. For example, among those with disabilities, students who are emotionally disturbed are three times as likely to leave high school by dropping out as students with visual, auditory, and orthopedic impairments. Yet, the indicators that predict the likelihood

of dropping out are the same for the disabled as for students who have no apparent disabilities: poor grades, low attendance, disciplinary problems, and disadvantaged or minority backgrounds. Thus, except for the special considerations set by the nature and severity of the disability, the knowledge accumulated in the study of the general population applies to those with disabilities as well.

Equivalency Certification

Of particular interest are those students who obtain a passing score on the General Educational Development (GED) Tests administered by the American Council on Education. A recent study contended that the GED certificate does not have the same value in the marketplace as a regular high school degree. The authors argue that the wages of young males who earn the GED are no higher than those of dropouts without GEDs who had the same number of years in school; furthermore, they are substantially lower than the wages earned by regular high school graduates. The researchers also found that earnings, hours of work, unemployment spells, and the job tenure of GED recipients are not distinguishable from those of high school dropouts. The authors contend that the lower economic returns for those who receive the GED imply that it compares unfavorably to a regular high school diploma.

In turn, the GED Testing Service has criticized this study on numerous grounds. The GED Testing Service points out that the sample of GED recipients is small. Furthermore, the earning comparisons among GED recipients, regular graduates, and dropouts are made in young adulthood, when GED recipients have considerably less experience as *graduates* than do traditional high school graduates. The study, they note, provides no data on the long-term consequences of receiving a GED credential.

At issue in this debate is the role and purpose of the GED in the education system of the United States. The average age of the GED test-taker is 26, but a substantial number of GED test-takers are young enough to still be enrolled in regular day programs. For example, 9 percent of GED test-takers in 1992 were age 17 or under and 13 percent were 18. The GED Testing Service sees the GED largely as a second-chance program for people who failed to graduate and who lack any other avenue to demonstrate their competencies. But there is increasing evidence that schools serving at-risk youth view discharging students to GED preparation programs

as an acceptable alternative to regular classroom settings. In fact, several states have pilot programs training school-age, at-risk youth to prepare for the GED. This use of the GED is at odds with the recommendations of the GED Testing Service.

There are both factual and policy questions embedded in this debate. The key issues for education research are factual. For instance, in what ways are alternative credentials like the GED comparable to traditional high school diplomas, and in what ways are they dissimilar? What are the career trajectories and life chances of GED recipients, high school dropouts who lack any credential, and regular high school graduates, and how are they alike or different? Do these trajectories differ depending on whether the GED is received at a young age or an older age? All of these questions deserve further study.

The policy questions concern whether at-risk students *should* be encouraged to enroll in GED preparation programs when they are still young enough to participate in regular high school programs. To date, these questions have been debated largely in the absence of convincing evidence, one way or the other. Solid empirical evidence that speaks to the similarities and differences among GED recipients, regular high school graduates, and dropouts lacking any credential—both before *and* after secondary schooling and credentialing—might help clarify these issues.

Transition to Adulthood

Outside school, the most prevalent experiences that young people encounter pertain to the transition to adulthood. Adolescence is the stage that lies between childhood and adulthood. Marked by explorations of identity and independence, it represents a transitional stage between childhood (in which individuals are dependent on their parents and families) and adulthood (in which individuals are largely independent of the families in which they were raised). This independence is manifested in several ways, including moving away from home, finishing full-time schooling, getting a full-time job, achieving financial independence, and entering into adult family roles, such as getting married and having children.

Increasingly, the traditional order of these various events has become jumbled. Many youths work while still in high school; others are sexually active, bear children, and get married. It is easy to

imagine how such experiences might interfere with high school completion, but the research base for examining these possibilities remains thin.

Adolescent Employment

The results of one major survey found that working more than 20 hours per week while in high school increased the likelihood of dropping out. The survey also found that working less than 20 hours per week had some beneficial effects on school completion and other academic activities, such as time spent on homework.

Other research found that increased time spent on nonacademic activities outside of school increased a student's likelihood of dropping out of school. For example, the more hours students worked during the sophomore year of high school, the more likely they were to drop out of school. While the effects of working during high school were generally negative, there were some aspects of work that had positive effects on student outcomes. In particular, working to save money for college had noticeable positive effects on the students' academic and social outcomes, especially actual college attendance.

Adolescent Pregnancy

The links between adolescent parenting and dropping out are just as tangled as those between employment and dropping out. Historically, young mothers have shown themselves to be less likely to obtain their high school diplomas; however, this may be more of a reflection of the impact of low income than early maternity. Poor women are more likely both to bear children at a young age and to drop out. Although data on the sequence of childbirth and dropping out have been lacking, it has been common to assume that young women become sexually active, experience childbirth, and then drop out of school, in that order. But, in fact, there are several things going on at once, and cause and consequence are hard to separate. At the same time that young women are becoming sexually active, they may be engaged in other problem behaviors as well, some of them in school. It may prove difficult to determine whether poor school performance leads to sexual activity or whether sexual activity leads to poor school performance and then, in both cases, to dropping out.

In fact, the most recent, best evidence on the timing of a first birth and high school completion suggests that having a baby while

in high school does not necessarily mean that the young women will not finish school. Researchers found that most young women who had a baby and remained enrolled in high school were as likely to eventually graduate from high school as women who did not have a baby and did not interrupt their schooling. But those young women who interrupted their schooling at the time they gave birth were less likely to return to complete high school, especially if they were older. They seemed to prefer completing their high school education by way of alternatives such as the GED. Finally, women who dropped out and then got pregnant and had a baby were also less likely to return to and complete high school, although they often obtained their GEDs.

With this review of the characteristics and correlates of students who drop out of school, we now turn to a brief discussion of dropout prevention programs and end this paper with a few suggestions for future research and program design.

Dropout Prevention Programs

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.

Nonetheless, most dropout prevention programs have not been carefully evaluated, even though program evaluation is essential to understanding the impact and possible replication of such programs. In those instances when evaluations have taken place, the programs often fail to fulfill their promise. Two recent reports on the evaluation of programs designed to keep students in school illustrate this issue.

One report described an attempt to replicate the Peninsula Academies model, a dropout prevention program in 10 California high schools. In 3 of the 10 replication sites, there was clear evidence that Academy students performed better than comparison group students. Yet in only one of the 10 schools was there a demonstrably lower dropout rate for the Academy students. The authors point out that implementation of the Academies model was inconsistent across sites.

The second report provided a sobering evaluation of the New Futures Initiative, a series of urban dropout prevention projects funded by the Annie M. Casey Foundation. The New Futures Initiatives were designed to restructure the delivery of services to youth in four medium-size communities with high dropout rates, high teen pregnancy rates, and high youth unemployment. Reporting on the first 3 years of the 5-year initiative, the evaluators described its total lack of success in restructuring the educational experiences of at-risk youth in these communities. They found little evidence of collaborations among schools and other agencies serving youth. Within the schools, they found little change in the social relations between youth and adults, or in the nature of the curriculum and instruction. Furthermore, there were no signs that the roles and responsibilities of teachers and administrators working in the schools had been fundamentally restructured.

The Need for Theory

A key contribution to the advancement of Goal 2 is likely to be the design and support of research that informs educators and the public about those aspects of students' experiences that determine whether or not these students graduate from or complete secondary school. In this light, steps are needed to move the field away from the atheoretical stance which has characterized much of the work to date, and in the direction of developing and advancing theoretical concepts that treat retention, graduation, and completion as consequences of a dynamic interaction of such variables as student characteristics, school context, occupational prospects, and cultural influences. There are a number of "big ideas" that might drive a national research agenda on dropouts. These could include:

Social Capital

- James Coleman's conception of "social capital" takes into account the importance of a network of sustained personal connections to convey expectations and conventional norms and which can also be acquired through rich and extensive interactions with adults. Weak social capital refers to the failure of families to communicate shared expectations, norms, and sanctions for not meeting the norms. According to the theory, the development of social capital by children is significant because it contributes to their readiness to internalize school norms and expectations. These expectations call for personal effort to develop the knowledge and skills that make up human capital, without which children may drop out of school unprepared for responsible participation in mainstream society.

  This area is only beginning to receive attention from researchers. Much more work is required to understand how communities develop and sustain the social capital necessary for students' success in school and how policies may be developed that will assist in this process, especially for children and youth with little initial access to these support networks.

Achievement Motivation

- The effects that such social variables as perceived opportunity, future orientation, and incentives may have on students' academic behavior, as well as on their transition from youth to adulthood, are the topics of study. For example, if we want virtually all youth to complete 12 years or more of schooling,

strong, credible social and economic incentives will be necessary to attract and keep youth who start life in socially and economically marginal circumstances. Disproportionate numbers of poor and minority children develop the view that they are at a disadvantage in school as well as in the marketplace and respond with indifference to learning and antisocial behavior.

Some critics have suggested that the connection between entry-level jobs and school performance should be reinforced by having employers reward the contents of high school transcripts rather than simply a person's possession of a diploma. Others have suggested alternative routes to work that combine learning with training or the development of national credentialing that would certify competence to employers everywhere. Research is needed to better understand the nature of incentives and their effects on student behavior and how programs may be designed that will inspire youth to devote their time and energy to learning rather than less productive alternatives.

Social Bonding

- The roles that membership, social bonding, interpersonal caring, and community play in convincing people to overcome their sense of alienation and develop an emotional attachment to social institutions such as school would be studied. For example, engaging alienated students in the tasks of academic work requires that school and learning be viewed as legitimate, fair, and worthwhile. There are many steps that seem intuitively necessary but require substantiation and study. Among them are:

  — A clarity of purpose that unites students in the pursuit of common goals rather than distracting them with a "something for everyone" curriculum.

  — Fairness and caring that helps students overcome fears of discrimination stemming from poor performance or differences of race, gender, or religion. Schools that strive to inspire and reward student effort and social participation are more likely to retain students than those that do not. The trick is to discover practices that bring these results.

Authentic Education

- Developing "authentic" school work that involves the learning of skills and content that have meaning and motivational appeal to the student is the goal of this research. The aspects of work

that build the willing participation of students are strikingly similar to those found in successful workplaces. They include:

- Intrinsic interest in the materials to be mastered so that students study and learn of their own volition;
- Sense of ownership derived from personal choice rather than by the imposition of authority; and
- Connection to the world outside of school that shows the student the relationship of schooling to his or her personal and working life.

These theories, among others like them, are dynamic rather than static. That is, they represent dropouts as students who are part of a social world and who interact with the people and institutions that surround them. As such, the theories offer a rationale for dropout programs based on the motivating properties of student life, rather than the unexamined assumptions that accompany mere membership in the at-risk categories. Accordingly, theories such as these offer an opportunity to replace the "head counting" and descriptive statistics that have to date characterized both research on dropouts and dropout prevention with explanations of behavior that offer a far more powerful and sophisticated rationale for future research and the design of dropout prevention programs.

References

American Council on Education, GED Testing Service. (1993). *1992 Statistical Report.* Washington, DC: American Council on Education.

Astone, Nan Marie, and McLanahan, Sara. (1991). "Family structure, parental practices, and high school completion." *American Sociological Review* 56:309–320.

Ayres, Leonard. (1909). *Laggards in Our Schools.* Philadelphia: Russell Sage Foundation.

Baldwin, Janet. (1990). "GED candidates: A decade of change." *GED Profiles: Adults in Transition,* No. 1. Washington, DC: GED Testing Service, American Council on Education.

Bishop, John H. (1989). "Why the apathy in American high schools?" *Educational Researcher* 18(1):6–10.

Braddock, Jomills H. II and McPartland, James M. (1990). *Alternatives to Tracking.* Baltimore: Center for Research on the Effective Schooling of Disadvantaged Students, Johns Hopkins University.

Brown, R.B. (1993). "School culture, social politics. and the academic motivation of U.S. students." In T. Tomlinson (ed.), *Motivating Students to Learn: Overcoming Barriers to High Achievement,* Berkeley, CA: McCutcheon Publishing Corp.

Bryk, Anthony S., and Driscoll, Mary E. (1989). *The School as Community: Theoretical Foundations, Contextual Influences, and Consequences for Students and Teachers.* Madison, WI: National Center on Effective Secondary Schools, University of Wisconsin.

Bryk, Anthony, Lee, Valerie, and Smith, Julia. (1990). "High school organization and its effects on teachers and students: An interpretive summary of the research." Pp. 135–226 in William H. Clune and John F. Witte (eds.), *Choice and Control in American Education, Volume 1.* London: Falmer.

Bryk, A. and Thum, Y. (1989). "The effects of high school organization on dropping out: An exploratory investigation." *American Educational Research Journal* 26:353–384.

Cameron, S.V. and Heckman, J.J. (1991). The non-equivalence of high school equivalents. Working paper no. 3804. Cambridge, MA: National Bureau of Economic Research.

Catterall, James S. (1989). "Standards and school dropouts: A national study of tests required for high school graduation." *American Journal of Education* 98:1–34.

Clune, William H., and White, Paula A. (1992). "Education reform in the trenches: Increased academic course taking in high schools with lower achieving students in states with higher graduation requirements." *Educational Evaluation and Policy Analysis* 14:2–20.

Coleman, J.S. and Hoffer, T. (1987). *Public and Private High Schools: The Impact of Community*. New York: Basic Books.

Corbett, Thomas, Deloya, Jeannette, Manning, Wendy, and Uhr, Liz. (1989). "Learnfare: The Wisconsin experience." *Focus* 12(2):1–10.

D'Amico, Ronald J. (1984). "Does working in high school impair academic progress?" *Sociology of Education* 57:157–164.

Eckert, R., and Marshall, T. (1938). *When Youth Leave School*. New York: McGraw-Hill.

Ensminger, Margaret E., and Slusarcick, Anita L. (1992). "Paths to high school graduation or drop out: A longitudinal study of a first grade cohort." *Sociology of Education* (65)(2):95-113.

Fine, Michelle. (1986). "Why urban adolescents drop into and out of public high school." Pp. 89-105 in Gary Natriello (ed.), *School Dropouts: Patterns and Policies*. New York: Teachers College Press.

Fine, Michelle. (1991). *Framing Dropouts: Notes on the Politics of an Urban High School*. Albany, NY: State University of New York Press.

Gottfredson, Gary D., and Gottfredson, Denise C. (1985). *Victimization in Schools*. New York: Plenum Press.

Grannis, Joseph P. (1991). "Dropout prevention in New York City: A second chance." *Phi Delta Kappan* 73(2):143–149.

Hamilton, Stephen F. (1987). "Raising standards and reducing dropout rates." Pp. 148–167 in Gary Natriello (ed.), *School Dropouts: Patterns and Policies*. New York: Teachers College Press.

Higgins, Catherine. (Summer 1988). "Youth motivation: At-risk youth talk to program planners." *Public/Private Ventures*, Philadelphia, Pennsylvania.

Jackson, Silvia R. (1989). "Learnfare: The state's perspective." *Focus* 12(2):11–14.

Kreitzer, Amelia, Madaus, George F., and Haney, Walt. (1989). "Competency testing and dropouts." Pp. 129–152 in Lois Weis, Eleanor Farrar, and Hugh G. Petrie (eds.), *Dropouts from School: Issues, Dilemmas and Solutions*. Albany, NY: State University of New York Press.

Lerner, Barbara. (March 1991). "Good news about American education," *Commentary* 91(3):19–25.

Levin, H. (1987). "Accelerated schools for disadvantaged students," *Educational Leadership*, 47(6):19–21.

Mac Iver, Douglas J., and Epstein, Joyce L. (1991). "Responsive practices in the middle grades: Teacher teams, advisory groups, remedial instruction, and school transition programs." *American Journal of Education* 99:587–622.

Marsh, Herbert W. (1991). "Employment during high school: Character building or a subversion of academic goals?" *Sociology of Education* 64:172–189.

McDill, Edward L., Natriello, Gary, and Pallas, Aaron M. (1987). "A population at risk: Potential consequences of tougher school standards for student dropouts." Pp. 106–147 in Gary Natriello (ed.), *School Dropouts: Patterns and Policies*. New York: Teachers College Press.

National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform*. Washington, DC: U.S. Government Printing Office.

Natriello, Gary, McDill, Edward L., and Pallas, Aaron M. (1990). *Schooling Disadvantaged Children: Racing Against Catastrophe*. New York: Teachers College Press.

Natriello, Gary, Pallas, Aaron M., and Riehl, Carolyn. (1990). *Creating More Responsive Student Evaluation Systems for Disadvantaged Students*. Baltimore: Center for Research on the Effective Schooling of Disadvantaged Students, Johns Hopkins University.

Pallas, Aaron M. (1986). *The Determinants of High School Dropouts*. Report No. 364. Baltimore: Center for Social Organization of Schools, Johns Hopkins University.

Rothman, Robert. (1992). "G.E.D. turning 50, eyes debate over student standards." *Education Week* XI(18), January 22, pp. 1, 10–11.

Stern, David, Dayton, Charles, Il-Woo Paik, Weisberg, Alan, and Evans, John. (1988). "Combining academic and vocational courses in an integrated program to reduce high school dropout rates: Second-year results from replications of the California Peninsula Academies." *Educational Evaluation and Policy Analysis* 10:161–170.

Toby, Jackson and Armor, David. (1992). "Carrots or sticks for high school dropouts?" *The Public Interest* 106(Winter):76–90.

U.S. Department of Education, National Center for Education Statistics. (1989). *Dropout Rates in the United States: 1988.* Washington, DC: Government Printing Office.

_____. (1991). *Dropout Rates in the United States: 1990.* Washington, DC: Government Printing Office.

_____. (1992a). *Dropout Rates in the United States: 1991.* Washington, DC: Government Printing Office.

_____. (1993). *Dropout Rates in the United States: 1992.* Washington, DC: Government Printing Office.

_____. (1992b). *Overview and Inventory of State Requirements for School Coursework and Attendance.* Washington, DC: Government Printing Office.

Upchurch, Dawn M., and McCarthy, James. (1990). "The timing of a first birth and high school completion." *American Sociological Review* 55:224–234.

Wagner, Mary. (1991). *Dropouts with Disabilities: What Do We Know? What Can We Do?* Menlo Park, CA: SRI International.

Wehlage, Gary G., and Rutter, Robert A. (1986). "Dropping out: How much do schools contribute to the problem?" *Teachers College Record* 87:374–392.

Wehlage, Gary G., Rutter, Robert A., Smith, Gregory A., Lesko, Nancy, and Fernandez, Ricardo R. (1989). *Reducing the Risk: Schools as Communities of Support.* London: Falmer.

Wehlage, Gary G., Smith, Gregory, and Lipman, Pauline. (1992). "Restructuring urban schools: The New Futures experience." *American Educational Research Journal* 29:51–93.

West, P. (1992). "Indian youths found prone to unhealthful behaviors." *Education Week,* April 1992.

ED/OERI 92-43

☆ U.S. GOVERNMENT PRINTING OFFICE. 1993 — 342-111/93154

ISBN 0-16-042930-7

OERI National Education Goals Work Groups

Work Group Coordinator
Hunter Moorman
Office of Research

Goal 1 Work Group (Readiness for School)

Elizabeth Demarest, Cochair
Office of Research
Anne Fickling, Cochair
FIRST
Kathryn Chandler
NCES
Christina Dunn
Library Programs
Charles Stalford
PIP
Sheryl Stein
OAS

Goal 2 Work Group (High School Completion)

Donald Fork, Cochair
Library Programs
Tommy Tomlinson, Cochair
PIP
René Gonzalez
Office of Research
Mary Frase
NCES

Goal 3 Work Group (Student Achievement and Citizenship)

Hunter Moorman, Cochair
Office of Research
Judy Segal, Cochair
Office of Research
Patricia Dabbs
NCES
Leslie DiBona
Library Programs
Luna Levinson
PIP
Allen Schmieder
FIRST
Ram Singh
Office of Research
Sheida White
NCES

Goal 4 Work Group (Science and Mathematics)

Bryan Gray, Cochair
FIRST
Henrietta Moody, Cochair
Office of Research
Blane Dessy
Office of Research
Cheryl Garnette
PIP
Carole Lacampagne
Office of Research
Lois Peak
NCES
Mary Sivertsen
Office of Research

Goal 5 Work Group (Adult Literacy and Lifelong Learning)

Barbara Lieb, Cochair
PIP
Nevzer Stacey, Cochair
Office of Research
Salvatore Corrallo
NCES
Gayle Fischer
NCES
David Loope
NCES
Liz Torbert
PIP

Goal 6 Work Group (Safe, Disciplined, and Drug-Free Schools)

Diane Aleem, Cochair
PIP
Oliver Moles, Cochair
Office of Research
Nancy Cavanaugh
Library Programs
Kathryn Chandler
NCES
John Grymes
NCES
Vonnie Clement
FIRST

The abbreviations listed above refer to the following offices and programs in the Office of Educational Research and Improvement (OERI):

FIRST—Fund for the Improvement and Reform of Schools and Teaching

NCES—National Center for Education Statistics

OAS—Office of the Assistant Secretary

PIP—Programs for the Improvement of Practice

BEST COPY AVAILABLE

U.S. Department of Education
Office of Educational Research and Improvement
PIP 93-1018