DOCUMENT RESUME

ED 365 471 PS 022 040

TITLE Reaching the Goals. Goal 2: High School Completion. Technical Report.

INSTITUTION Office of Educational Research and Improvement (ED), Washington, DC.

PUB DATE Dec 93

NOTE 131p.; Prepared by the OERI Goal 2 Workgroup. For a related document, see ED 363 455.

PUB TYPE Information Analyses (070) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC06 Plus Postage.

DESCRIPTORS Disabilities; Disadvantaged; *Dropout Characteristics; *Dropout Prevention; *Dropout Rate; Dropout Research; *Dropouts; Elementary Secondary Education; Graduation; *High Risk Students; High School Students; School Effectiveness

IDENTIFIERS *National Education Goals 1990

ABSTRACT

Noting that a better grasp of the dynamics of student development is needed if dropout prevention is to move beyond temporary and usually tardy palliative programs, this report reviews current research on the factors that determine whether or not students will complete high school. It also suggests avenues of future research in order to yield the information necessary to reach National Education Goal 2, a 90 percent high school graduation rate in the United States. Part 1 of the report serves as an introduction, examining the meaning of graduation rates and outlining current high school completion rates. Part 2 defines high school dropout rates, examines the demographics of the dropout population, and explores the reasons why students drop out of school and return to school. Part 3 outlines the origins of the dropout issue and the relevant educational theories and practices, and discusses the problem at the micro-, middle-, and macro-level. Part 4 examines current and possible future research on mainstream dropouts, traditionally disadvantaged groups, students with disabilities, alternative certification, adolescent employment, adolescent pregnancy, and dropout prevention programs. Four essays on the dropout issue are appended: (1) "Perspectives on Dropping Out" (Philip Cusick); (2) "High School Graduation as a Motivational Phenomenon: A Motivational Perspective" (Sandra Graham); (3) "Research Agenda for Achieving Goal #2" (Fred Newmann and Gary Wehlage); and (4) "Research Direction Based on Goal 2" (Jay Smink and Patricia Cloud Duttweiler). The report and the appended essays contain separate reference lists. (MDM)

Reaching The Goals

GOAL 2

High School Completion

Technical Report

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

December 1993

Foreword

This technical report formed the basis for *Reaching the Goals. GOAL 2, High School Completion* (ED/OERI PIP 93-1018), which was published in September, 1993. It was prepared by the OERI Goal Two Work Group: Cochairs Tommy M. Tomlinson and Donald Fork, Mary Frase, and Rene Gonzalez. Selected papers commissioned for this project are appended.

TECHNICAL REPORT

GOAL TWO

High School Completion

National Goal #2

RAISING GRADUATION RATES: WHAT DO WE KNOW AND WHAT DO WE NEED TO KNOW?

Prepared by

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Office of Education Research and Improvement

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Introduction

The aim of this paper is twofold: first, to describe and discuss what we know from statistics, research and practice about the factors that determine whether or not students will complete their secondary school education, and which ones will drop out and fail to complete. econd, to indicate the avenues of future research that promise to yield the information necessary to reach the national educational goal of a 90% high school graduation rate.

The plan is based on an assessment of the following sources of evidence: (1) OERI-supported research initiated and completed over the past 10 years; (2) a review of other federal research within and outside the Department of Education; and (3) published reviews and analytic studies about dropping out and dropout prevention/recovery programs. Taken together, these lines of evidence and analysis indicate that over the past 10 years great strides have been made in identifying the characteristics of students at risk of dropping out of school and designing and implementing dropout prevention programs.

Nevertheless, much of the research and theory remains primitive, largely confined to the identification of associations between the demographic characteristics of adolescents and their school enrollment status. If dropout prevention is to move beyond temporary and usually tardy palliative programs, a better grasp of the dynamics of student development will be necessary. Accordingly, the attendant research and theory will have to be expanded to include a wider array of contextual variables as well as consideration of the students' educational experience from entry rather than merely the date of departure from school.

Toward an understanding of these developments and their implications for future work, the nature of National Goal 2 and what a 90% graduation rate may mean is discussed. Next the relationship of the concepts of school completion and dropping out is examined, followed by a discussion of the demographic and behavioral characteristics of selected groups of students that highlight the distinctions between dropouts and other students.

Following this overview, the existing literature on school dropouts and dropout prevention is reviewed, and unexplored or insufficiently studied issues are identified. The final section describes possible topics for further study, including an appeal for the development of conceptions of schooling that emphasize the development of student persistence and retention rather than short term programs of dropout prevention.

What does a 90 percent graduation rate mean?

Although the concept of high school graduation may seem simple and straightforward there still is considerable ambiguity about how to define and measure graduation rates. What does a graduation rate of 90 percent mean? There are several issues involved in measuring graduation rates. These include:

- Conceptually, what is meant by graduation? Are those who complete high school by receiving alternative credentials, such as by achieving a passing score on the General Educational Development (GED) examination, to be considered graduates? Are certificates of completion or attendance to be considered like diplomas?

- How is the variation in state graduation requirements to be taken into account?

- Is a status rate that measures the proportion of the population who have completed high school at a particular point in time, or a cohort rate that measures the proportion of a specific group (e.g., ninth graders in 1988) who have completed high school more appropriate?

- What population group should be used to measure graduation rates? Should the focus be on 17- and 18-year-olds, some of whom may still be in high school, or an older group, such as those in their mid-20s? Should the baseline be ninth graders, or seventh graders, or first graders?

These questions remain unresolved, and a detailed discussion of them is beyond the scope of this paper.[1] Nevertheless, the meaning of the phrase "high school graduate" depends on making judgments that address the questions raised above.

How far from the goal are we?

Policymakers often ask, How many additional students would have to complete high school each year in order to achieve a 90 percent graduation rate? From the questions raised above it is obvious that the answer to that question is likely to vary considerably depending

[1] See the five NCES dropout reports -- Frase (1989); Kaufman and Frase (1990); Kaufman, McMillen, and Whitener (1991); Kaufman, McMillen, and Bradby (1992); and McMillen et al. (1993) -- for a fuller discussion of types of dropout rates and the relationship between dropout rates and high school completion.

on what measure is chosen to answer this question. High school completion rates for 19- to 20-year-olds are used to illustrate how that question might be answered.[2] In 1992, of the 6.6 million 19- and 20-year-olds, 83% had completed high school either by obtaining a high school diploma or an equivalency certificate such as a GED (table 1). In order to reach a 90 percent level for that age group in 1991, there would have had to be approximately 440 thousand more 19- to 20-year-olds who had completed high school.

Table 1. Number of additional high school completers needed 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 for 19- to 20-year-olds	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: Derived from McMillen et al. (1993), pp. 15 & 141.

Meeting the goal

The concern underlying all goals is improving educational outcomes for all children. In the case of Goal 2, the aim is that all students complete a quality high school education. In the long run, as the Resource Group for the National Education Goals Panel on Goal 2 noted (National Education Goals Panel, 1991), completing high school is a necessary but not a sufficient condition for students to learn the skills, knowledge and values that make for a competent adult in U.S. society. Some students complete high school with relatively low levels of skills.

National Goals 3 and 4 focus on the content of education, on what happens to students as long as they remain in school. Therefore, the discussion of Goal 2 in this paper will focus on dropout prevention and recovery, i.e., keeping students in high school or bringing them back once they have dropped out so that they may learn, rather than on the mere fact of completion, which under current conditions can mean a variety of things. Similarly, the emphasis is upon evidence and measures necessary to engage students in learning rather than on developing and improving the content of their studies, which more properly belongs under Goals 3 and 4.

[2] High school completion rates include both those who finished high school by earning a regular diploma as well as those who completed by an alternative means, such as by receiving a GED credential. See McMillen et al. (1993) for a discussion of the difference between completion and graduation rates.

- While the concept of student "engagement" carries the attractive connotation of willing participation, most of the effort to date concerns steps that schools have taken to retain students who are deemed threats to leave prematurely, or to retrieve those who have departed. Although it is implicit in all school improvement measures, there is far less evidence, much less a coherent theory, that explains and demonstrates how at-risk students may be engaged in productive school careers rather than belatedly restrained from dropping out or retrieved afterwards.

Although the ideal is for all students to possess both the diploma and the skills, knowledge and values, many students presently do not. Some graduate without sufficient skills to participate productively in society. Still others drop out of high school. In both instances students have disengaged from learning; dropping out merely represents the most extreme form of disengagement from school. Restoring the engagement of disaffected students is the foundation upon which skills acquisition and dropout prevention are built, and a necessary, if not sufficient, condition for boosting the high school completion rate to 90%.

Defining Dropouts: A Statistical Portrait[3]

In the past, there has been considerable confusion about dropout rates, both in terms of the magnitude of the rates and their definition. Much of that confusion has been reduced by activities of National Center for Education Statistics (NCES). The NCES now publishes an annual dropout report, Dropout Rates in the United States -- Frase (1989); Kaufman and Frase (1990); Kaufman, McMillen, and Whitener (1991); Kaufman, McMillen, and Bradby (1992); and McMillen et al. (1993) and has developed a standard definition for collection of dropout data from states and localities. Comparable data on dropout rates are now available annually at the national level, and such data will begin to be available at state and local levels by the end of 1993.

How big is the problem?

There are three commonly used types of dropout rates, which measure different aspects of dropping out:

- 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 who have not completed high school and are not enrolled at one point in time, regardless of when they dropped out.

[3] Unless otherwise noted, the data in this section are derived from McMillen et al. (1993) or Frase (1989).

- Cohort dropout rates measure what happens to a single group (or cohort) of students over a period of time.

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

- Event rate, grades 10-12	4.4 percent
- Status rate, ages 16-24	11.0 percent
- Cohort rate, 1980 sophomores	17.3 percent
- Cohort rate between 1988-1990 (8th to 10th grades for most students), 1988 eighth graders	6.8 percent

While the figure for the annual (event) dropout rate -- 4.4 percent -- may seem relatively low, it represents a substantial number of young people dropping out of school each year -- an estimated 381,000 between October 1991 and October 1992. The status dropout rate is a cumulative measure, representing those who have dropped out over many years. In October 1992, there were approximately 3.4 million status dropouts ages 16 to 24.

The trends in dropout rates over the past decade have been encouraging, as both event and status dropout rates have been declining. Status dropout rates declined from 14.6 percent in 1979 to 11.0 percent in 1991. The trends for blacks have been even more encouraging, declining over the past two decades and at a faster rate than for whites. As a result, the differential between the dropout rates of blacks and whites has narrowed substantially during this period.

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. For example, in 1992 the status dropout rates for those 16 to 24 were:

- Whites	7.7 percent
- Blacks	13.7 percent
- Hispanics	29.4 percent.

Dropout rates for American Indians/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. Status dropout rates in 1992 were 11.3 percent for males and 10.7 percent for females.

- Dropout rates are higher for students from low socioeconomic status backgrounds, from single-parent families, and from non-English family backgrounds (table 2). Students whose parents or siblings were dropouts are themselves more likely to drop out. Individuals who marry or have children prior to the time they would graduate from high school are more likely to drop out.

- When blacks and whites from similar social backgrounds are compared, dropout rates for blacks are not higher, and in some cases may be lower, than those for whites.

Location. The dropout rate is greater in cities than in suburbs and non-metropolitan areas. The status rates for 1992 were:

-	Central cities	13.4 percent
-	Suburbs	9.6 percent
-	Non-metropolitan areas	10.6 percent.

Dropping out is worse in the West and South; the status dropout rates in 1992 were:

-	Northeast	8.6 percent
-	Midwest	7.9 percent
-	South	12.4 percent
-	West	14.4 percent.

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, or who are overage for their grade are more likely to become dropouts than other students. Students missing many days of school for reasons other than illness are more likely to drop out than those who miss few, if any, days.

Composition of dropouts. The majority of dropouts do not come from population groups with a high probability of dropping out. For example, table 1 indicates that while Hispanics, blacks, and American Indians have much higher dropout rates than whites, these three minority groups accounted for one-third of the dropouts from the sophomore class of 1980. Similarly, students from families with less than two parents present in the household were far more likely to drop out, yet students from such families represented about one-third of all dropouts. Of all dropouts from the sophomore class of 1980:

- 66 percent were white,
- 86 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,
- 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 non-missing 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, reported in Frase (1989).

Two factors contribute to this pattern. First, the number of students in many "at-risk" categories is relatively small. While dropout rates are much higher for students with grades of "mostly D's or below," such students constitute only a small proportion of all students. As a result, students with such low grades accounted for only 9 percent of the dropouts from the sophomore class of 1980 (Ralph and Salganik, 1988). Dropouts who come from population groups with a relatively low risk of dropping out will later be referred to as "mainstream dropouts."

Second, even among those population groups with high dropout rates, only a minority of students drop out. That is, most students "at-risk" of dropping out -- based on their background or prior experiences and behavior -- do not drop out. For example, almost 80 percent of students from single-parent families complete high school. Similarly, more than three-quarters of the students from families in the lowest socioeconomic quartile did not become dropouts.

Reasons for dropping out

Findings from the High School and Beyond Survey (Peng, 1983) indicate some common reasons given by students for dropping out of school, some of which differ by gender:

- "Having poor grades" and "school was not for me" were both mentioned by about one-third of all dropouts as reasons for leaving high school;
- Young men commonly explained that they left school because they could not get along with teachers (21 percent) or were expelled or suspended (13 percent);
- A common reason for young women to drop out was that they were getting married (31 percent) or were pregnant (23 percent);
- Twenty-seven percent of the young men and eleven percent of the young women reported leaving school early because they were offered a job and chose to work; and
- Less than six percent of all dropouts gave illness or disability as the reason for leaving school.

The reasons given by students for quitting school ought not be viewed as causes of dropping out. These retrospective reports may be inaccurate, may be colored by what has happened to the student leaving school, and may represent rationalizations for their actions. Furthermore, often several events may have happened around the same time, making it difficult for even a participant to disentangle the sequence that led up to leaving school.

Such reasons are insufficient by themselves to explain who stays in school and who does not, since other students with the same circumstances remain in school. Indeed, Higgins

(1988) reported that students who stayed or left alternative programs were indistinguishable from one another in their reactions to the programs, their socioeconomic background, and their descriptions of their experiences in the programs. Thus, it may be that a combination of these conditions, the severity of an individual problem, or the unavailability of alternatives are the deciding factors for leaving school.

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 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 four years of their expected date of graduation. 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 U.S., including the territories (American Council on Education, 1993). The role of the GED or other equivalency credential as a means of completing high school is discussed in greater detail below.

Dropouts who later earn a diploma or an equivalency certificate tend to resemble students who never dropped out in their characteristics. The same characteristics that differentiate dropouts from other students also distinguish dropouts who return and complete from dropouts who do not return to school. Among dropouts from the sophomore class of 1980, the earlier a student dropped out, the less likely they were to later complete high school and if they ever completed high school, the more likely it would be by means of an equivalency certificate (Kolstad and Kaufman, 1989).

Asian dropouts are most likely to complete high school, while Native American 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 status backgrounds and with better grades while in school complete more frequently than those from low socioeconomic status families and with poor grades.

The next two sections explore what we know, and what we need to know, about school dropouts and dropout prevention.

What Do We Know?

Origins of the issue

Wehlage et al. (1989) briefly sketch the history of research and thinking about dropping out of school. They show how, in the early decades of this century, the problem of school dropouts was largely viewed as a problem with the schools. Leonard Ayres (1909), in his classic work Laggards in Our Schools, argued that the school curriculum at the time was too

challenging for most students, and that schools were not really interested in educating large numbers of children. Others, such as Eckert and Marshall (1938), also pointed out ways in which schools were not meeting the needs of non-college-bound and non-middle-class students.

As both the rhetoric and reality of access to secondary and postsecondary education blossomed in the middle part of this century, however, the nature of the dropout problem was redefined. Wehlage et al. (1989) argue that, once a majority of American youth were completing high school, the blame for non-completion began to shift from the school to the individual. This doubtless was hastened by prevailing theories of educational disadvantage that focused on social disadvantages and the culture of poverty. Dropping out was thus viewed as evidence of a flaw in individuals who were academic failures or social misfits (Pallas, 1986), and research focused on the characteristics of individuals -- their social backgrounds, personality characteristics, and problem behaviors -- that predicted dropping out of school.

More recently there has been a resurgence of interest in the role that schools themselves play in the dropout process. The work of Fine (1986; 1991) and Wehlage and his colleagues (Wehlage and Rutter, 1986; Wehlage et al., 1989) have directed attention to the ways in which the internal policies and practices of schools often serve to push students out of school. Some scholars (e.g., McDill, Natriello and Pallas, 1987) have written about school responsiveness, that is, the extent to which schools are able to respond institutionally to the academic and other needs of the students they serve. This view draws attention to the needs of individual children and youth, the policies and practices of the school, and the match between the two.

Relating theory to practice

There is a close relationship between the prevailing theories about school dropout and educational disadvantage, on the one hand, and the strategies that are being adopted at the national, state, and local levels to grapple with the problem on the other. For example, in the sixties, when the spotlight was on the putative deviance of individuals who left school before completion, programs were intended to change the attributes of those individuals to make them more like the mainstream middle-class graduate (Natriello, McDill and Pallas, 1990).

Reciprocally, the strategies in use shape the underlying theories about the nature of the problem. For example, currently there are two major types of strategies in use. The first strategy is often referred to as a case-management approach. This approach targets individual students deemed to be at risk of dropping out on the basis of some measurable characteristics, such as reading below grade level, being overage for grade, or having histories of disciplinary problems. The approach offers students the opportunity to participate in some set of program components, such as a specialized curriculum, counseling, or a school and work program. Often the focus is on the early identification of students who are at risk of dropping out, and on keying the intervention to school problems when they begin to emerge. This approach, however, while focusing on individual students and their academic and social needs and problems, may implicitly -- though not necessarily -- place the blame for those needs and problems on the students themselves.

The second strategy in common use in dropout prevention programs is a systemic restructuring approach. This approach emphasizes the role or responsibility of the school in producing school dropouts, and regards all students enrolled in school as at risk of school failure. Accordingly, rather than focusing on individual children and youth, systemic restructuring examines the way schools work, and assumes that by changing the system itself, the educational experiences of all students will be improved, including, of course, those at greatest risk of school failure. While the conception of this approach improves upon the simplistic notion of dropout prevention, the evidence and theory that bear on its effects are sparse and scattered and offer little that is reliably associated with school completion and academic engagement.

Defining the problem

Dropping out of school is a complicated and multi-faceted phenomenon. There is evidence that dropping out is more fruitfully viewed as a process, not an event. It is relatively rare for students to make a snap judgment to leave school. Rather, the more common pattern is for students to disengage or withdraw from school over a stretch of time, with the final stage of disengagement or withdrawal to be complete severance of ties with the school. In some cases, this process can be traced back many years. This suggests that simply focusing on the actual event of dropping out may mask the processes and experiences that led up to dropping out of school. A longer-term perspective may be more appropriate.

A corollary of this view is that strategies for reducing dropping out may be directed at the beginning of the process, perhaps in elementary or middle school, rather than in the latter years of high school, when the process may be nearing completion. Desirable as this may be, it opens a Pandora's box of possibilities for what may be considered a dropout prevention approach or program. For example, the set of 89 projects funded in 1988-89 by the School Dropout Demonstration Assistance Program, a federal demonstration program, included programs targeted to the early elementary grades side-by-side with re-entry programs intended to bring students who had already dropped out of school back into the fold. This situation underscores the need for a theoretically coherent approach to dropout prevention, one that would direct research toward a systematic exposition rather than a scattershot search for success.

To fully comprehend the dynamic process that determines whether students stay in school or leave requires simultaneous consideration of the students and the exigencies of their lives, the schools and their local policies and practices, and the state and federal policies that shape the social and educational views of the nation. Thus, there are macro (national and state policy), middle (district and school policy) and micro ("student life") levels from which to view and analyze the dropout problem.

The macro level of analysis

The macro level consists of large-scale social and educational policies developed at the national, state or district level. Examples include the effects on the dropout rate of the national effort to raise academic standards in U.S. schools in the early 1980s, the prospective effects of establishing a national curriculum that requires all students to study a common core of courses and subjects, the effects of West Virginia's attempt to tie drivers' licenses to staying in school, and the consequences of Wisconsin's Learnfare program which makes welfare support contingent on school attendance.

The two key macro initiatives of the last decade are the school reform movement and incentive programs, sometimes referred to as "carrots and sticks" (Toby and Armor, 1992). Most of these programs have been enacted at the state level, but taken together they sum to a de facto national policy.

School Reform Movement. In the early 1980s, a number of reports decrying the condition of American education emanated from various sources, most notably the National Commission on Excellence in Education's (1983) report A Nation at Risk. These reports typically called for higher standards for students in the academic content of courses, the (better) use of (more) time for school work, and higher student achievement. Several scholars, including McDill, Natriello and Pallas (1987) and Hamilton (1987) reviewed the possible consequences of raising standards for potential school dropouts. They identified some intended consequences of raising standards that might improve the academic achievement of potential dropouts, but also noted some unintended consequences that might cause marginal students to leave school prematurely, especially in the absence of specific strategies to help low-achieving students meet the new standards.

State graduation requirements and course taking. The most prominent macro-level standard-setting initiatives have centered on the nature of the curriculum and achievement standards. Many states increased the requirements for number and level of academic courses needed to graduate from high school, but the implications of this increase for potential dropouts remains unknown. Although the evidence and experience to date has been skimpy, at least one promising dropout prevention program, Levin's "accelerated (elementary) schools," is predicated on higher expectations for academic performance and the motivational value of interesting and challenging curricula (Levin, 1987). However, it is too early to tell whether the early experience will inoculate the students against dropping out when they reach their teens.

Clune and White (1992) have demonstrated that students in low-achieving schools increased their course-taking in academic subjects during the 1980s, especially in science. Overall, the increase was in the middle-range of high school courses -- that is, neither remedial nor college preparatory. They conclude, however, that many factors affect high school course-taking, of which state graduation requirements are just one. As yet, though, there are

no parallel studies of how increased state graduation requirements have influenced the likelihood that low-achieving students will complete high school.

The extent to which state-to-state differences in graduation requirements affect state-level comparisons of school dropout and graduation rates is unknown. What it means to be a high school graduate is not the same from state-to-state, because the states vary considerably the course requirements they establish for obtaining a regular diploma. Furthermore states change these requirements over time. Other differences among the states include whether passage of one or more competency tests is required and how students are treated 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 an I.E.P., whereas other states may give such students an alternative award, such as a certificate of completion or attendance. Such differences across states and over time complicate monitoring the national graduation rate, particularly in this era of reform when states have been increasing the rigor of their graduation requirements.

Differences among the states also exist with respect to alternative credentials as well as to regular diplomas. For example, while the GED Testing Service sets a minimum passing score on the GED, states can and do vary in their requirements above that minimum level for awarding a GED. There are differences in who can take the GED exam. Furthermore, each state sets its own criteria as to what constitutes passing scores on the GED exam and there is considerable variation in the state standards.

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, 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 a review published in 1989, Kreitzer, Madaus and Haney examined the literature on minimum competency testing and school dropouts. Ironically, the key finding of their search for evidence on the linkage between competency testing and dropping out is that there is very little research on this topic. While they note that many states with high dropout rates also have high-stakes minimum competency testing programs, they are careful not to draw a causal connection. They conclude by emphasizing the need for greater research on the effects of minimum competency testing on a range of outcomes that include dropping out of school and its precursors, such as retention in grade, self-esteem, and the suitability of the school curriculum to the interests and ability of low achievers.

Shortly after the Kreitzer, Madaus, and Haney article appeared, Catterall (1989) published a major study on the effects of high-stakes minimum competency tests on school dropouts. His interviews with counselors, test coordinators and principals revealed that many educators believe that minimum competency tests are so watered-down that they do not serve as a barrier even for low-achieving students. At the same time, these educators acknowledged that they did not have direct data on whether the presence of minimum competency tests served

to push students out of school prior to completion. In contrast, many students had negative opinions about such tests, and students who had failed a required graduation test were more likely to express doubts about their own chances of graduating from high school -- even over and above the influence of their school grades and family background.

Other observers (for example, Lerner, 1991), however, have concluded that minimum competency testing has contributed significantly, perhaps singularly, to the improvement in academic achievement of minority and disadvantaged children during the 1980s. To the extent that the prospect of passing minimum competency tests for promotion or graduation leads students to study harder and learn more, and to the extent that increased average achievement reduces the number of students who would later dropout because of academic failure, these tests would be classified as a positive influence on school holding power.

Nevertheless, Catterall's (1989) study remains the best empirical evidence to date on the effects of standard-setting on potential dropouts. But he acknowledges the indirect nature of focusing on students' self-reported chances of finishing high school, rather than on whether those students actually did graduate. To date, there has been little or no rigorous evaluation of the impact of the higher student standards adopted as part of education reform (Medrich et al, 1992). Direct evidence on the effects of high-stakes tests, and other manifestations of higher standards, on the likelihood of dropping out of school remains a pressing priority for future research.

Incentives and Disincentives to Learn. A number of initiatives have been developed that are intended to strengthen the connections between students' experiences in elementary and, especially, secondary school, on the one hand, and their lives after, or outside of, K-12 schooling, on the other. Some of these initiatives rely on incentives, i.e., rewards that are offered to students on the basis of their performance in school. Others rely on disincentives, typically punishments meted out to students for failing to attend or perform well in school. Most incentives rely on a future-orientation by the student, since they promise to pay off following the accumulation of qualifying credits, based on grades, attendance, or other signs of desirable behavior. Disincentives are more likely to be present-oriented, since the punishment (e.g., loss of eligibility to engage in sports, a drivers license, or welfare benefits) is usually delivered directly following the failure to perform.

In sharp contrast to most conceptions of dropout prevention, there is an extensive and relevant literature on the dynamics of human motivation that could be used in the design of effective incentive programs. Yet, few or none of these programs draw upon this literature for their conception or design. As a consequence, at best the policies and programs represent examples of raw empiricism and generally require assumptions about human behavior that find little support in the theory or research that is available. This appears to be an area where social policy could be informed and improved by social science, but the science has been ignored by policymakers, who instead tend to express their pique about the apparently intentional indifference of students to the responsibilities of learning.

Incentive Programs. Some observers attribute the relatively poor academic achievement of work-bound high school students to a failure of the market place to justify the necessary effort with appropriate rewards in the workplace (Bishop, 1989). For example, employers do not allocate entry level jobs -- either their wages or their desirability -- based on the grades obtained or the content of the courses taken during high school. Employers require only the diploma to confirm the eligibility of the applicant. The diploma stands as testimony to certain desirable traits (persistence, civility, punctuality), but only secondarily as evidence of ability or academic competence.

As a remedy for this oversight, a number of leading educators, including Albert Shanker, the President of the AFT, have proposed that a credentialing process be developed that would identify areas of competence and performance that would be rewarded by employers according to the quality of the student's record. The motivational assumption is that if students knew or believed that their grades and the quality of their courses would determine their entry level salary and the quality or desirability of the job they are offered, they would study harder and do better in school and be less likely to drop out. Little is known about the plausibility of this assumption, or of the likely effects of such an incentive program.

Disincentive Programs. At the macro level, several states have attached various penalties to a student's decision to stop attending or drop out of school. Two of the most prominent of these initiatives are Wisconsin's Learnfare program and West Virginia's drivers license revocation law.

Learnfare. As described by Corbett, Deloya, Manning, and Uhr (1989), the Wisconsin Learnfare program is designed to encourage regular school attendance among teenagers in families receiving Aid to Families with Dependent Children (AFDC) by reducing family benefits when these teenagers fail to meet the attendance requirements set by the program. These requirements allow no more than two unexcused full-day absences in a month, but provide for good-cause exemptions. The average sanction in 1989 was about $100 per month.

Corbett et al. (1989) and Jackson (1989), an official in the Wisconsin Department of Health and Social Services, disagree on whether or not Learnfare has led teenagers to return to school or improved their attendance. However, both parties agreed that the administrative data gathered in the first year of the program were subject to limitations so severe that firm conclusions about the program's impact were impossible. Wisconsin's Learnfare program and similarly controversial programs adopted by other states deserve careful evaluation, including an impact assessment that takes account of the family's welfare as well as the school attendance of their children.

Drivers licenses. Toby and Armor (1992) analyzed the effects of West Virginia's license-revocation law. The West Virginia law revokes the drivers license of dropouts under the age of eighteen and of still-enrolled students with either ten consecutive or fifteen total unexcused absences during a single semester. A number of other states have passed similar legislation. Toby and Armor's analysis of West Virginia dropout rates from 1985 to 1990

showed no evidence of reduced dropout rates for the state as a whole in the two school years in which the law was in effect, compared to the four previous school years. They suggested that this is because the law did not affect most dropouts, because they either had no drivers license to begin with or were already age eighteen or older and therefore exempt from the sanction. They also argue that the law is predicated on the possibly false assumption that the personal cost of not having a license outweighs the personal cost of staying in a school setting that may be unpleasant. Toby and Armor's study is a reminder that if incentives are to work, whether carrots or sticks, they must offer consequences sufficient to gain the subjects' concerned attention.

In summary, firm evidence is lacking on the effects of macro-level initiatives such as the school reform movement, particularly raising standards for performance, and of incentive/disincentive programs on the likelihood of young people persisting in school to graduation. Despite their growing popularity, few of these policies have been analyzed from the standpoint of their motivational properties or the likely consequences of these properties. Neither have the programs been examined systematically for their effects on student performance and behavior.

The middle level of analysis

The middle level consists of the influence on the likelihood of dropping out, staying in school, or returning to school of policies and practices determined within the schools. Among these are school organization, the effects of being retained in grade, and the role of incentives. Secondary schools are extremely open systems, and their structure and process are difficult to describe. The distinction between school organization and specific policies/ practices used in this section to categorize actions within schools may be somewhat artificial.

School Organization. Bryk, Lee and Smith (1990) provide a comprehensive review of the effects of high school organization on student outcomes, including student engagement and academic achievement. While they do not consider the effects of school organization on school dropouts in particular, it is only a small step to generalize from their analysis. Bryk, Lee and Smith consider the ways in which external characteristics of school organization (i.e., school size, school governance, parental/community involvement, and student body composition) influence the internal organization of schools (i.e., the cultural system, administration, formal organization of teachers' and students' work, and the structure of social relations), which in turn can affect teacher outcomes (i.e., such as satisfaction, self-efficacy, morale, and commitment), and student outcomes (i.e., such as academic achievement and participation, connection, attachment, and integration into the school setting).

In their interpretive review, Bryk, Lee and Smith point to the handful of studies that examine the influence of school organization on dropping out. The origins of this line of inquiry stem from the work of Wehlage and Rutter (1986). These researchers, using data from NCES' High School and Beyond study, documented that, compared to students who stayed in school, dropouts were far less likely to believe their teachers were interested in students, and far more likely to judge discipline in their schools to be unfair or ineffective. Wehlage and

Rutter (1986) thus were able to document that specific school policies and practices -- the discipline system and teacher-student relations as perceived by students -- might contribute to the drop-out problem.

Wehlage and Rutter's work was extended by Coleman and Hoffer (1987), who focused specifically on differences in dropout rates between public and Catholic high schools, and the ways in which the organization and governance of public and Catholic schools might account for those differing dropout rates. Bryk and Driscoll (1989) also built on this earlier work, by examining the influence of the school on dropping out and other student outcomes. They defined as "communal schools" those with shared values among staff, common activities and social interaction patterns, and an ethos of caring. They found that communally organized schools had lower dropout rates, less student misbehavior, and higher staff morale.

Hill, Foster, and Gendler (1990) in a comparative study of New York City public (comprehensive and magnet) and private (Catholic) high schools affirmed the general findings of Coleman and Hoffer that discipline, an academic ethos, a strong social contract between the schools and the students, an emphasis on outcomes rather than process, parental involvement, and a common curriculum were associated with higher achievement, less truancy, and a greater commitment to the school as an institution. All of these consequences work against dropping out and reflect the part that school culture can play in reducing premature departure.

Research on the impact of school organization on dropping out has produced some promising results. But only a handful of researchers have explored the connection between the organizational properties of schools and the persistence of students in those schools, and the measures of school organization are far from ideal. NCES' National Education Longitudinal Study of 1988 (NELS:88) is expected to be a major resource for continuing work on the relationship between school organization and dropping out.

Retention in grade. Probably the school-level policy that has received the most attention among people concerned about school dropouts is that regarding retention in grade. Previous research 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, the nature of this relationship is not clear. 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 have revealed an upward trend over time 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 phenomenon 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 school entry is delayed beyond the age at which they are eligible to start.

Grissom and Shepard (1989) reviewed the effects of grade retention on dropping out. They found that studies of dropping out routinely suggest that there is an association between being overage for grade, or having been held back a grade in school, and the risk of dropping out of high school. However, isolating the effects of grade retention per se as a policy is difficult, because students who are low achievers are both more likely to be held back and to drop out of school.

Moreover, few retention studies follow students throughout their school careers, especially from the early elementary grades where retention is most likely to occur. But Grissom and Shepard's research suggests that, across several different districts, and taking student achievement and various background factors into account, students who are retained in grade are in fact more likely to drop out of school than similar students who are not retained. They acknowledge uncertainty as to the mechanism by which grade retention increases the risk of dropping out. They conclude, however, that because retention in grade is a policy that is largely under the control of the school and also may be harmful to students, the practice deserves careful future study and evaluation.

Other school-level policies and practices that warrant further attention to their consequences for potential dropouts include grouping practices and alternatives to tracking (Braddock and McPartland, 1990), specific discipline policies (Gottfredson and Gottfredson, 1985), student assessment and evaluation procedures (Natriello, Pallas and Riehl, 1990), and other practices that aim to be "responsive" to student problems (MacIver and Epstein, 1991).

Incentives. A number of middle-level program strategies have been conceived which presume that the well-documented limits in the ability of disadvantaged students to delay gratification will be overcome by offers of rewards and incentives that ensure future access to college. The programs have been endowed by a variety of sources, including personal philanthropy, corporate contributions, and state policies. All the programs offer to guarantee college tuition and other costs to at-risk students who graduate from high school and are eligible for college admission. The incentive is relief from financial barriers to college attendance, as the result of the desired behaviors of high school completion and acceptable grades. Perhaps the best known 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 they commit to graduating from high school.

In the case of Lang's original initiative, the financial incentives were coupled with the hiring of a full-time "facilitator" designed to act as an advocate on behalf of the children in dealing with the school and social service agencies. The facilitator, and the close contact with and interest of Lang, have been more prominent in the students' own reflections on their experiences than the tuition guarantees. Although there has been no credible evaluation of Lang's or similar initiatives, a large variety of programs, all based on similar premises, have been designed and offered to disadvantaged children in return for their effort, perseverance, and achievement. These programs, like those at the micro level, typically ignore the well documented features of human motivation that a well designed program must take into account.

Consequently, most of the programs are again based, at least implicitly, on assumptions that find little empirical or theoretical support, and, accordingly, may be expected to have limited power in achieving the desired goals.

The micro level of analysis

The micro level is about individual differences or changes within individual students, that may affect the likelihood of 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. At the micro level, interest in school dropouts has taken several forms. First, it has long been recognized that children from disadvantaged family backgrounds are more likely to drop out 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.

Astone and McLanahan (1991) begin with the well-recognized finding 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. Part of this is due to the fact that children in single-parent families are much more likely to live in poverty than children in two-parent families, and poverty remains a strong predictor of who finishes high school. But income does not completely account for the lower educational achievements of children in single-parent families.

Astone and McLanahan 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. Children from non-intact families were more likely to report that their parents expected them to obtain less schooling, did not monitor their schoolwork, and supervised their activities less closely than were children who lived with both biological parents. Yet these differences in parenting practices accounted for little of the gap in graduation rates between children from intact and non-intact 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 educational system and beyond. By studying children's school careers over long periods of time, evidence of critical periods that change the course of children's lives may emerge. This genre of research thus may help in the early identification of potential school dropouts, and in suggesting specific school initiatives to anticipate troublesome times in school.

The few studies that track children over many years suggest that the problems of future dropouts have their roots early in the school career. For example, Ensminger and Slusarcick

(1992) 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 both predicted whether a child eventually graduated or dropped out, as did family poverty and mother's education. They conclude:

> 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. (111)

In addition to shedding light on the events that may lead up to leaving school, longitudinal studies can help chart the various educational and career trajectories of advantaged as well as disadvantaged youth who leave school. In particular, little is known about the lives of the many dropouts who eventually return to an educational setting in the time between when they left and when they return. Even more important, there is no a clear understanding of the personal characteristics of returnees, 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, especially among those who are not members of "at-risk" populations, better information on both the dropouts who choose to return and those who do not. The GED Testing Service has conducted research about the characteristics and attitudes of those who choose to take the GED examination (Baldwin, 1990, 1991a, and 1991b). Unfortunately, that research cannot provide the crucial insights into the differences between dropouts who pursue a GED and those who do not.

Academic influences. Natriello, McDill and Pallas (1990) note three central academic influences on students within schools that may determine whether they stay in school or not. First, for many students the academic program is too difficult and challenging, because the standards for performance are set too high. Second, for other students the academic program is not sufficiently challenging or engaging, because the standards are too low. Third, for some students the academic program is simply irrelevant to their lives, because they see no connection to their cultures or lives after school. School policies and practices could attempt to promote engagement by adopting policies and practices that shift the academic standards of the school curriculum, the ways in which school activities develop students' skills and abilities, and the extent to which the school's academic program is meaningful to the lives of students and relevant to their futures.

Non-academic influences. Natriello, McDill and Pallas (1990) also note three non-academic 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 non-academic dimension to life in schools that is frequently described as leading to withdrawal. Schools may adopt a number of policies and practices that are designed to strengthen students' bonds to school.

Social influences. A further micro level distinction can be made between in-school and out-of-school sources of influence. 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 influences. Peer culture has much to say about student attitudes about achievement and the value of doing well in school and graduating. In general, students believe that doing well in school is desirable and graduating is important. Yet the idea of doing as well as one can is often taken lightly, and in some quarters sanctions are brought against students who exceed the norms of expectation. Some peer crowds hold learning and the effort it requires in contempt, and indeed, develop a counter academic stance toward achievement and attaining a diploma which can infect an entire school (Brown, 1991). The degree to which these views and their accompanying behavior contribute to a school ethos of underachievement and undergird decisions to leave school before graduating is unclear, but by all evidence they are particularly strong in schools that primarily serve disadvantaged students.

What Do We Need to Know?

Although the high school completion rates of certain traditionally disadvantaged groups, in particular Hispanics and Native Americans, are substantially lower than the rates of both black and white students from similar economic and social backgrounds, even a dramatic improvement in their graduation rates would have little impact on the nation's progress toward meeting Goal 2. Because whites compose 75% of all students, the absolute number of white dropouts far exceeds those from minority groups whose dropout rates are three or four times higher.

Consequently, to make substantial progress toward a high school graduation rate of 90%, attention will have to be paid to reducing the dropout rate of otherwise "mainstream" students, while also expanding the effort to reduce the gap in completion rates between mainstream and disadvantaged minority groups. This implies a fourfold research agenda.

- What can be learned about **mainstream dropouts**? What explains the large numbers of youngsters who are not seemingly disadvantaged that fail to complete high school? And why do so many more of such youth complete high school rather than leave?

- What are the factors that lead **Hispanics, Native Americans** and **students with disabilities** to fail to complete high school at rates so far in excess of the mainstream?

- What are the contribution and consequences of **alternative certification** for high school completion?

- To what extent does the lure of assuming adult roles, such as **employment** and **parenting**, challenge the prospects for higher graduation rates?

Mainstream dropouts

One of the most evident but unremarked features of the dropout population is that over half of the dropouts are not "at-risk" by the usual criteria of that status. While obvious, the point is not idle. The majority of dropout prevention efforts are aimed at students with at-risk attributes, namely, minority, low income, single parent families, drugs, pregnancy and the like. To be sure, the focus is not misplaced, since the at-risk population is overweighted with minority and low income students, and because they compose a disproportionate fraction of those students who actually drop out.

Still, most of the dropouts are not obviously at-risk. Indeed, most dropouts are students with no distinguishing features, that is, they possess none of the social, economic or ethnic and racial characteristics that are typically associated with high dropout rates. One might say that prevention has taken place where the light is, that is, with students whose background and behavior identifies them as the most likely candidates to drop out. Yet, a significant reduction in the number of dropouts and commensurate increase in graduation rates will occur only when programs can effectively address the "hidden" majority, those students whose identity betrays little of their potential for premature departure and whose proclivity to drop out is not easily or early identified.

Most research and programmatic interventions, however, are directed at the high risk groups, and little attention has been paid to those dropouts who are not readily identifiable from their backgrounds or histories of poor performance. Accordingly, research aimed at identifying "mainstream" dropouts, the features of school and life that inclines them to leave school, the signs that they betray which signal their likely departure, and the programs and experiences that they seek which would keep them in school or encourage them to return would be highly desirable.

A related issue where more research would be useful involves the cumulative impact of "at-risk" factors on the likelihood of dropping out and completing. The issue really has two

dimensions. The first is related to the likelihood of dropping out and the second to the characteristics of dropouts as a group. To what extent does the probability of dropping out rise as the number of "at-risk" factors which characterize a student rises? Are there certain combinations of "at-risk" factors which appear to be associated with particularly high dropout rates?

The second, and perhaps more interesting, issue is the characteristics of the entire dropout pool in terms of "at-risk" factors. When such factors are examined one-by-one, the majority of dropouts are not classified as being "at-risk" at noted above, i.e., the majority of dropouts are white, have C averages are better, are not overage for grade, etc. However, it may be possible that the majority of dropouts have at least one "at-risk" factor, but the particular factor(s) varies from student to student. The proportion of dropouts characterized by none, one, two, or three or more of the most commonly identified risk factors is not known. It may turn out to be the case that most dropouts do possess at least one risk factor, but that there is considerable variation as to which factor(s). This may be part of the answer to the question of why apparently mainstream students drop out. While they may appear to be "mainstream" in most regards, they may not be in some crucial dimension, which raises the likelihood they will drop out.

However, looking at the interactive and cumulative impact of risk factors simply represents another, albeit somewhat more sophisticated, type of descriptive and correlational analysis. Once the descriptive analysis has been carried out, using data bases such as NCES' longitudinal studies, it will be important to look for the underlying dynamics that account for the observed patterns. What are the crucial processes that affect individuals decisions to stay in or leave school and how do those vary within and between different groups of students? Why do some students remain engaged in school, while seemingly similar students do not?

Traditionally disadvantaged groups

The dropout rates of traditionally disadvantaged groups, especially Hispanics and Native Americans, remain far higher than the rates of other U.S. children and youth. Even more disturbing, while 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% of Hispanic dropouts ages 16 to 24 in 1991 had completed 6 or fewer years of schooling, while only 5% of non-Hispanic dropouts had completed 6 years of school or less (Kaufman, McMillen, and Bradby, 1992).

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 (Frase, 1992). 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 Native Americans paints a picture even more dispiriting than that for Hispanics. Claims of dropout rates from reservation schools approaching 50%, drug and alcohol abuse, broken families, poor schools, and poverty all conspire to depress the prospects of Native American students (West, 1992). Little is known about the kind and quality of educational experience offered by Bureau of Indian Affairs (BIA) schools or the nature of educational programs that would help promote school retention. The number of students involved is comparatively low, in fact, so low that conventional educational statistics do not report their status. Consequently, a productive first step would be oversampling Native Americans in national surveys and targeting research projects to the Native American population. The Bureau of Indian Affairs (BIA) also has a major interest in the education of Indian children, and there may opportunities for OERI and BIA to work together in studying the problems of this special population.

Students with disabilities

The education of disabled students is the special charge of the Office of Special Education and Rehabilitative Services (OSERS). A recent examination of the status of special education students (Wagner, 1991) has provided a picture of the characteristics and educational prospects of students with disabilities. Prominent among the findings was the evidence that the dropout rates of students with disabilities exceed those of youth in general; youth with disabilities drop out of high school at a rate almost 20 percentage points higher than students in the general population.

Dropout rates also vary widely by disability. For example, students who are emotionally disturbed are more than three times as likely to leave secondary school by dropping out as students with sensory and orthopedic impairments. However, the indicators that predict the likelihood of dropping out are the same for disabled as non-disabled students: poor grades, low attendance, disciplinary problems, 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.

Since OSERS has developed a research and development program directed toward the disabled population, the limited resources of OERI might better be devoted to more neglected areas. However, OERI should follow closely and incorporate into its efforts the results of the OSERS research.

Alternative 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 (ACE). A recent study by University of Chicago economists Cameron and Heckman (1991) has contended that the GED certificate does not have the same value in the marketplace as a regular high school diploma. Using data from the National Longitudinal Study of Youth, the authors argue that among young males the wages of young adults who earn the GED are no higher than those of dropouts without GEDs with the same number of years in school, and are substantially lower than the wages earned by regular high school graduates. They also find that the earnings, hours of work, unemployment spells, and job tenure of GED recipients are not distinguishable from those of high school dropouts. The Chicago authors contend that the lower economic returns to the GED imply that it is not comparable to a regular high school diploma.

In turn, the GED Testing Service (GEDTS) has criticized the Chicago study on numerous grounds. Regarding the nature of Cameron and Heckman's analysis, the GEDTS points out that the sample of GED recipients is small and only involves young males, and that the earnings comparisons between 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 evidence about the long-term consequences of receiving a GED credential. The GEDTS also acknowledges that the GED Tests are designed to assess whether the test-takers have skills in reading, writing, and mathematics that are comparable to those of graduating high school seniors, and do not measure other behavioral traits or characteristics, such as persistence, dependability, and the like, that may be developed more easily by participation in formal schooling.

At issue in this debate is the role and purpose of the GED in the U.S. education system. 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% of GED test-takers in 1992 in the U.S. were aged 17 or under and another 13% were 18 (American Council on Education, 1993). The GED Testing Service sees the GED largely as a second-chance program for young, and older, adults who lack any other avenue to demonstrate their competencies. But there is increasing evidence that schools serving at-risk youth see discharging students to GED preparation programs as an acceptable alternative to regular classroom settings (Fine, 1991). In fact, several states are piloting programs training school-aged, at-risk youth to prepare for the GED (Rothman, 1992). This use of the GED is at odds with the established recommendations of the GED Testing Service.

There are both factual and policy questions embedded in this debate. The key issues for OERI are factual: 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 are fruitful questions for further inquiry.

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 policy questions have been debated largely in the absence of convincing evidence on the factual questions noted above. Solid empirical evidence on 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 the policy questions.

Adolescent employment

The most prominent out-of-school experiences that young people encounter pertain to the transition to adulthood. Adolescence is marked by explorations of identity and independence, and represents a transitional stage between childhood, in which individuals are extremely 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: moving away from home, finishing full-time schooling, getting a regular job and achieving financial independence, and entering into adult family roles, such as marrying and having children.

Increasingly, the traditional ordering of these various events has become jumbled. Many youths work while still in high school, and others are sexually active, bear children, and marry. It is easy to imagine how these out-of-school experiences might interfere with the completion of high school, but the research base for examining these possibilities remains somewhat thin.

D'Amico (1984), using data from the National Longitudinal Surveys of Young Men and Young Women, found that, for a number of groups of students, working more than 20 hours per week while in high school increased the likelihood of dropping out of high school. But he also found that working less than 20 hours per week had some beneficial effects on school completion and other academic outcomes, such as time spent on homework.

Marsh (1991) tested these two contrasting conclusions about time and work, using data from the High School and Beyond study. He found that the more hours a student worked during the sophomore year of high school, the more likely the student was 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 benefits on students' academic and social outcomes, especially actual college attendance.

Adolescent pregnancy

The linkages between adolescent pregnancy and dropping out are just as tangled as those between employment and dropping out. Historically, there has been a clear correlation between adolescent childbearing and the likelihood of graduating from high school. However, this relationship may in part reflect the relationship between income and dropping out. Poor women are more likely both to drop out and to bear children at a young age.

Although direct evidence on the timing of childbirth and dropping out have been lacking, it has been common to assume that young women become sexually active, experience childbirth, and drop out of school, in that order. But in fact there are several things going on at once. At the same time that young women are becoming sexually active, they are also influenced by what is happening to them in school, and they may be engaged in other problem behaviors as well. Disentangling whether poor school performance leads to problem behavior including sexual activity and then to dropping out, or whether sexual activity is a part of problem behavior that leads to poor school performance and then to dropping out, will likely be extremely difficult.

In fact, the most recent, and 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 result in a failure to finish school. Upchurch and McCarthy (1990), using data from the National Longitudinal Survey of Youth, 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 evidently preferred to complete through alternatives such as the GED. Finally, women who dropped out and then had a baby were also less likely to return to and complete high school, although they often acquired the GED.

Dropout prevention programs

The Federal Role in Evaluation. OERI has already made substantial contributions to the development of evidence about dropouts and their characteristics. The NCES publishes an annual report of 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 the 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 (NDN) provides access to promising, if not proven, prevention programs to the nation's schools.

Like the growth in program development and research, there has been a similar growth in reviews of the available evidence about program effects. There is substantial redundancy among extant reviews of dropout prevention programs, mainly because of the scarcity of quality evaluations and the limitations in the quality of the program data upon which they are

based. Until better evidence becomes available, OERI support of further reviews should be a low priority.

The National Education Goals are interrelated and OERI will play a role in research and development activities that are concerned primarily with other National Goals, but that may overlap with Goal 2. For example, improving the quality of elementary education will no doubt have an important effect on the prospects for high school graduation, but the issue may be defined primarily in terms of making progress toward Goals 3 and 4, which are concerned with improving student achievement and the overall quality of education. That is, better education as a dropout prevention strategy is acknowledged to be a basic consideration, but the development of improved curricula or instructional methods for the purpose of improving the rate or degree of academic progress is a matter that transcends concerns about graduation rates.

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 (Natriello, McDill and Pallas, 1990). Is there a role for OERI in the evaluation of dropout prevention programs? To illuminate this issue, consider two recent reports on the evaluation of programs designed to keep students in school.

Stern et al. (1988) reported an attempt to replicate the Peninsula Academies model in 10 California high schools. In three of the 10 replication sites, there was clear evidence that Academy students performed better (i.e., had better attendance, earned more credits, and had higher GPAs) than comparison group students. But 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, and the results seemed to tail off after one year.

Wehlage, Smith and Lipman (1992) provide a sobering overview of their evaluation of the New Futures Initiative. This initiative, funded by the Annie M. Casey Foundation, was designed to restructure the delivery of services to youth in four medium-sized communities with high dropout rates, high teen pregnancy rates, and high youth unemployment. Reporting on the first three years of the five-year initiative, the authors describe the total lack of success of the initiative 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, and within the schools, little change in the social relations between youth and adults, the nature of curriculum and instruction, and no signs of fundamentaliy restructured roles and responsibilities of the teachers and administrators. While they end their review on an optimistic note, it is clear that this phase of the New Futures Initiative is unlikely to have produced serious improvements in the achievements of the youth in the four communities housing the initiative.

The Stern et al. (1988) evaluation is mainly a replication study of a particular model already in place. It has little generalizability beyond its immediate focus, the replicability of a program in some specific sites. While the results may suggest the likelihood of replicating

that particular model in other sites, they do not hold broader implications for the understanding of school dropouts or dropout prevention. In this sense, then, a study like this might not be a wise investment for OERI.

In contrast, the Wehlage et al. (1992) evaluation grapples with more generic issues in the connections between schools and other institutions, and in attempts to restructure schools to improve the educational experiences of youth. Although the evaluation deals with specific initiatives underway in four communities, the problems identified appear to have a much wider application. A similar argument might be made for the evaluation of the New York City Dropout Initiative (Grannis, 1991). Because the implications are so broad, such studies might be a fruitful investment for OERI.

There are, of course, other parts of the Department of Education that are more explicitly concerned with evaluation, most notably the Planning and Evaluation Service in the Office of Planning and Policy, which is sponsoring the evaluations of the School Dropout Demonstration Assistance Programs. But the emphasis there typically leans toward "Did this program work?" more than "Why did this program work (or not work)?" While OERI probably should not invest heavily in evaluation studies, there may be a place for those exceptional evaluations that are able to convincingly connect the programs being evaluated to a broader set of issues under study by the agency.

In sum, OERI's most important contributions to making progress toward Goal 2 rest in the design and support of research that informs educators and/or the public about those aspects of students' experiences -- macro-level policies, students' experiences in schools, and the features of individual children and youth -- that determine whether or not these students graduate from or complete secondary school.

New directions in research

In this light, steps are needed to move the field away from the atheoretical stance that has characterized much of the work to date, and in the direction of developing and advancing theoretical conceptions that treat retention and graduation/completion as consequences of a dynamic interaction of student characteristics, school context, occupational prospects, and cultural influences. Wehlage (1992) suggests that a number of "big ideas" might drive a national research agenda on dropouts, including:

> Social Capital. James Coleman's conception of "social capital" takes account of the importance of a network of sustained personal connections which convey expectations and conventional norms and that are accumulated through rich and extensive interactions with adults. Social capital, as distinguished from financial and human capital (money and skills and knowledge), describes the network of information and social support that exists in families, neighborhoods, and communities. 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.

Social Bonding. Social bonding describes the roles of membership, interpersonal caring and community that reflect the need of people to experience attachment (bonding) to a social institution (the school) if they are to benefit from participation in its operation and goals (the opposite of alienation). Engaging students in the tasks of academic work will require that the schools and learning be viewed as legitimate, fair, and worthwhile, in short, the very opposite of alienation, now so common among many youth, rich or poor. There are many steps that seem intuitively necessary to achieve this, but they require substantiation and study from educational research. Among them are:

- o Clarity of purpose that unites students in the pursuit of common goals rather than distracts them with a "something for everyone" format.

- o Fairness and caring which overcome fears of discrimination stemming from poor performance, or differences of race, gender, religion and the like. Schools that strive to call out and reward student effort and social participation are likely to have better results in retaining students who learn than those that do not, but the trick is to discover practices through which these benefits can be realized;

Incentives and Opportunity. 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 the marketplace and choose to defend themselves against this threat by indifference to learning and anti-social behavior. Bishop has suggested that the connection between good entry-level jobs and pay and actual school performance should be reinforced by having employers reward the contents of the high school transcript rather than merely the possession of a diploma. Others have suggested alternative routes to work that combine learning with training, or the development of national credentialing to certify competence to employers everywhere, as well as a variety of practices that exert sanctions or offer benefits on behalf of improved learning and school attendance. In all of these circumstances, research is needed to better understand the nature of incentives and their effects of 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.

Academic Engagement and Authentic Work. Many students are not engaged in the task of learning because they believe the curriculum to be irrelevant to their lives. An authentic curriculum may better hold the students' attention by offering meaningful and

relevant educational experience together with an assessment that taps behavioral as well as cognitive capabilities. Authentic work involves the learning of skills and content that have meaning and motivational appeal to the student. The dimensions of work that build the willing participation of students are strikingly similar to those found in successful workplaces. They include:

- o Developing intrinsic interest in the materials to be mastered, so that students study and learn of their own volition rather than because they must and will be punished if they do not;

- o A sense of ownership that benefits from the motivational consequences of personal choice rather than imposition of authority in furthering personal initiative; and

- o A connection to the world outside of school that initiates the student into the relationship of schooling to the remainder of his personal and working life.

Research on these topics would take us far in understanding why students stay in school and toward developing policies and practices that would advance that goal. As such, they offer a clearly superior and far more durable grasp of effective schooling and practices that will reduce the dropout rate than the present proliferation of stopgap measures and prevention programs.

These points are enlarged in the companion paper, Recommendations for Future Work (Challenge 4, National Goal #2), especially in the agenda (Appendix D) prepared by Fred Newmann and Gary Wehlage. The reader is urged to read both papers in order to gain a complete picture of the views, conclusions and recommendations in this area of study. Taken together, these theories and the hypotheses that flow from them, in company with extant research, offer the opportunity to develop a long-term agenda that would replace the static and limited perspective of dropout prevention with a dynamic and systematic program of school engagement and retention.

Research issues on dropouts and school completion

Finally, many questions remain unanswered. The following questions, in particular, would undergird and steer a research agenda for OERI on dropouts and school completion:

- o How has the school reform movement influenced the dropout rate? In particular, how has increasing academic standards affected potential dropouts?

- o What is the range of incentive and disincentive programs currently in operation or under consideration? What is the motivational basis for such programs? What effects do incentive and disincentive programs have on the likelihood of

dropping out? What are the ethical concerns that should be taken into consideration in the design and implementation of incentive programs?

- What is the effect of school organization on dropping out? Are there measurable features of school organization that are associated with higher or lower dropout rates?

- How do the academic and social aspects of school influence decisions to remain in or drop out of school? How do peer influences contribute to the development of student attitudes toward persistence, studying, and staying in school?

- How does the organization of instruction affect dropping out? Are there alternatives to traditional ways of grouping students for instruction, such as grade retention, tracking, and assigning students to courses, that help students stay in school?

- What specific school-level policies and practices promote or hinder staying in school and, more generally, student engagement?

- What accounts for the dropout behavior of "mainstream" students who are neither disadvantaged nor low-achieving?

- What contributes to the extremely high noncompletion rates of Hispanics, Native Americans, and disabled youngsters?

- How does family background influence the dropout process? What is the role of parent-child and parent-school relations?

- What is the range of educational careers that characterize young people, especially those who interrupt their schooling? 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?

- How do working in high school, becoming a parent and/or getting married affect the educational careers of young people? Are workers, parents and spouses more likely to drop out of school and less likely to return?

These questions can be addressed through a variety of types of research, including analysis of large-scale national databases such as NELS, case studies, conceptual/theoretical development, adding items to ongoing surveys, and evaluations. Regardless of the methodological approach, work funded by OERI should focus on the larger issue of getting students engaged in school and learning, not just keeping them physically in a classroom.

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APPENDIX

SELECTED COMMISSIONED PAPERS

To assist in the development of a research agenda for Goal 2, several experts were commissioned to provide the OERI Work Group with their conception of the issues and proposals for future reserarch. The following four papers represent their views on these matters.

APPENDIX A

PERSPECTIVES ON DROPPING OUT

Philip A. Cusick

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Introduction

The problem has been stated, causes explored, perpetrators identified, characteristics itemized, solutions offered, failures noted, successes documented. What is left to say about the substantial number--12% to 25% of the youthful population, many of them poor and minority who do not complete high school, either in the conventional four years or ever? The facts about dropouts are clear, or at least as clear as they are likely to get. What is not clear is what significance should be attached to the facts. Indeed, as Weber (1949) pointed out, "There is nothing in the things themselves to give them significance" (p. 78). The purpose of this paper is to examine perspectives that might be taken toward the issue and to pose researchable questions that might follow. I will argue that in the context of schools as currently organized, dropping out makes sense, and it is not within the power of the school to prevent it. To treat the matter will require a focus that extends beyond the schools.

It's Not That Bad

One might take the view similar to Finn's (1987) that dropping out is not as serious a problem as some claim. Concentrating on the facts showing that up to half of those who drop out of high school complete a diploma by age 28, he argues that dropping out is a discontinuity in the transition to adulthood, but not a fatal or permanent discontinuity.

> It is incorrect to view dropping out as a static or permanent condition in the United States. It is a stage in the lives of many people, sometimes brief, sometimes protracted, but always susceptible to change (p. 10).

Finn (1987) argues that the usual way of calculating dropouts, failure to complete four years of high school by age 19, tries with a static figure to explain a dynamic event. High school completion goes on into the population's early 30s; even students without any high school diploma access higher education, schools have increased their success for a century, and increases in graduation rates have improved with groups that in former times might not have come or stayed if they had come. What we are witnessing with the remaining 25% of 17-year-olds and 11% to 12% of 27-28-year-olds who fail to finish is the last and most intractable group. It should neither surprise nor dismay us to see completion rates slow.

Nor should we conclude that efforts long underway have failed or should be abandoned. With these efforts in place and concentrated on a smaller set of students, success, even with these most intractable, is likely to continue.

Finn (1987) suggests a change in perspective, a reduction in rhetoric, a long view of the issue and a more positive stance toward the schools and their current efforts. In a way, he echoes Schwab's notion that "it takes three generations to create an education person." Rather than an individual problem, dropping out could be viewed as a multi-generational family issue, for those who leave school without graduating are likely to come from poorer parents who themselves dropped out. And recent immigrants who account for a high percentage among dropouts are least likely to have parents and grandparents who graduated from or even attended school.

One could take as evidence of school success a child who came from unschooled, perhaps even illiterate, parents and who herself reached the 10th or 11th grade. That she dropped out before graduating is a fact. That she progressed far beyond the educational level of her parents is also a fact. Emphasizing the latter fact and placing the dropout phenomenon in a multi-generational perspective would not change the dropout figures, but it would place particular groups with high dropout rates in terms relative to their families and relative to other groups who increased their school achievements, not in one but in several generations.

This is not to deny the issue, its importance, or its need to be addressed. Nor is it to treat the matter cavalierly. But a cross-generational family perspective might turn evidence of school failure into evidence of perhaps-too-slow but nonetheless stead school success. And more, it would enable researchers to distinguish dropouts from families that are making steady educational progress from dropouts whose families are not.

Dropping Out Makes Sense: The Dropout's View

Alternatively, one might consider the school-experience of those who choose to leave. Is their free, willful, and legal decision to leave within graduating unreasonable? For students who drop out, school may be often an all-around unpleasant experience. Cusick (1973, 1983), Everhart (1983), Grant (1988), Hollingshead (1949), Kidder (1989), Lightfoot (1983), Okey (1990), and Willis (1977) have documented the negative school experiences of many students who choose to leave. For such students, school may be a set of bad experiences right from the first or second grade (Johnson, 1985). They fail more classes and do less homework, thus incurring the displeasure of their teachers. They are less likely to engage in extra-curricular activities and so deny themselves or are denied those more pleasurable aspects of school. They break the rules more frequently, thus incurring the displeasure of administrators. And they tend to be among the economically poorer and so suffer social discrimination from their peers.

Schools rank students on everything from achievement on standardized tests to popularity. Educators and policy makers disparage the dropout phenomenon as a broad social and economic problem. But for students who stand at the bottom of every ranking and for whom school is a prolonged set of unpleasant experiences, school is a personal problem. Dropping out is the solution. And with options such as G.E.D., adult or alternative education, early leavers can assert options and so preserve some dignity on their way out the door.

Here, too, one can take a multi-generational family perspective and place the decision to stay or dropout within the family. Welage (1992) says that retention and completion are a consequence of a dynamic interaction of student characteristics, school context, occupational prospects, and family and cultural influence. But the family, not the school, is where those things come together, and many dropouts come from families where education is not valued, where learning is disparaged, and where parents themselves did as poorly in school as their offspring.

Okey (1990) documented the educational experiences of several dropouts' families. He found that dropping out is, from the family's view as well as the dropout's view, a reasonable act, particularly given the way the other family members' experienced school, devalued learning, and expressed only marginal career ambitions. Dropouts' parents and their parents before them, as well as their children, viewed school as a long set of negative experiences. They could recite the reasons one needed a high school diploma, but they did not associate school with upward mobility or personal improvement. Rather, they equated schooling with a diploma, and a diploma with the credential one needed to obtain an entry level job. That was all.

The line of thinking that blames dropping out on the school does not give enough credit to the students who drop out, nor to their families as coherent and cohesive social units with a generations-deep perspective on education. The adjectives often used to describe the families of dropouts, e.g., fragmented, dysfunctional, non-intact, single parent, etc., do not do justice to the families' staying power, cohesion, integrity, or the validity of the educational perspective that they pass on to their children.

In Okey's (1990) families, there was a culture of young people growing up quickly. By the time children were in their early teens, they were already being treated as adults or had themselves appropriated adult status. The extended and protected childhood that middle and upper class people provide their children was not given to youth in these families. All family members worked early in life and so placed a stronger claim on adult status. They were impatient with the schools' doctrine of adolescent inferiority-adult superiority. Many brought their adult behaviors--smoking, drinking, drugs, insistence on equality with adults--into school and so disrupted the school that treated them as children.

In the child's early school years, parents had tried to send the school into school, well disposed and eager to learn. And when the child was in school-trouble, the parents

intended to use negative sanctions such as grounding and physical punishment to coerce them into better behavior. But in later years, parents tired of staff complaints, embarrassing conferences, the school's punitive treatment of their children and arrogant treatment of them. In the end, although they regretted their child's decision to drop out, they supported and defended their child and that decision against the school. For both children and their parents, dropping out solved a host of problems.

Dropping Out Makes Sense: The School's View

To continue the notion of dropping out as a reasonable act, one might consider the point of view of the school. Dropping out is not serious, particularly given the well-documented social and economic problems that characterize the least educated. But as an issue it has to be considered relative to the school, because it is from school that one drops out. What the school can offer is education, the attendant intellectual pleasure, the promise of financial security, social mobility, and career advancement. But those are the things that many students either disparage or by the time they are in their early teens have figured out for themselves.

It is true that schools have an underlying agenda of order, control, and competition and that this agenda is a source of trouble for many who drop out. It is also true that schools are not very good at dealing with students that disparage school values and refuse to comply with what the school sees as quite modest behavioral demands. A bureaucratic agenda is essential to the notion of school. One could not run a dense, busy, and crowded school full of young people without emphasizing control. School is not a natural institution, no more so than is the quiet and dutiful acquisition of positive abstract knowledge a natural act. Schools have to keep track of people and events. Resources have to be allocated among competing groups and students have to be accounted for. One may as well blame the zebra for its stripes as blame the school for its emphasis on order.

Schools have to emphasize order; otherwise, they could not continue as schools. Schools have to assure the citizenry that their children are warm, dry, orderly, and fed. A school's hours and credits express measures of effort and achievement and so add a currency or medium of exchange that extends easily throughout the system. That the school is bureaucratic is true. But the bureaucracy gives the school functional intelligibility, predictability, and the appearance of rationality that a large and busy endeavor needs.

Waller (1932) pointed out there is a natural conflict between what schools demand and what students fall naturally into doing. Cusick (1991) summarized observational studies of schools and students to argue that students are not naturally prone to line up, sit still, speak one at a time, study math, science, and foreign language, and behave in a collective and orderly manner that would make easy the transmission of positive abstract knowledge. Students are much more prone to drift into class- and culture-based groups where they practice behaviors and attitudes that they brought into school with them and that

reflect their class and culture, rather than those that the school wants to teach. It is not an impossible conflict; it is solved in bureaucratic ways by imposing some rules, order, groupings, expectations, and sanctions. The great majority of students do not find these constraints oppressive or distasteful; rather, they agree that they are necessary, both to the transmission of knowledge and to the maintenance of orderly collective behavior.

But a number of students, many of whom later drop out, find even minimal bureaucratic requirements intolerable. Cusick (1983), Czikszentmihalyi and Larsen (1984), Everhart (1983), Grant (1988), Hollingshead (1949), Stinchcome (1964), and Willis (1977) recorded adolescent behavior in school and told of students who drank, took drugs, smoked, skipped, walked out, told off, even assaulted teachers, refused to do any work, and in general made things difficult for everyone. Such students brought to school their distaste for academic achievement, alienation from peers, disdain of extra-curricular activities, negative adult practices, fighting, drinking, smoking, drug taking, and rule defying. For the school, their departure was a not-unhappy occasion.

It may be that schools develop a more relevant curriculum, one that will interest students, be more useful and less abstract, and more student centered. As Powell, Cohen, and Farar (1986) points out, schools have been carrying on a debate about what curriculum is most relevant for at least 100 years, and that discussion will continue. But relevant is a relative term, and it is unlikely that schools can do much more than they already have to make the curriculum sufficiently relevant to keep students who for their own reasons want to leave.

One might say that schools should de-emphasize order. But school people learned, most recently in the 1960s and '70s, that when schools are deemed by parents to be disorderly, teachers and administrators get fired. Several researchers, among them Clinton (1977), Colfer and Colfer (1979), Gold and Miles (1981), Hennigh (1979), Smith and Keith (1971), and Johnson (1985), have documented the importance of order to communities and the events that ensure when communities feel that schools are disorderly. The citizenry will not turn its children over to institution that do not give the appearance of knowing what they are doing. The school bureaucracy gives that appearance, and the school bureaucracy will not be sacrificed to the dropouts' concerns, even though some of those concerns are legitimate.

One who takes this school perspective could be accused of "blaming the victim," the victim being the student who cannot or will not adjust to what the schools view as reasonable constraints. But dropping out, like any social act, has to be seen in the context of the school. And schools are not very good at dealing with young adults who cannot tolerate bureaucratic expectations, who do not value what the schools promise, and who would rather leave than stay. That many of them are poor or minority or both and come from families with low educational aspirations and that they have suffered some social injustices are not to be denied. But one cannot blame schools for asking students to show up on time and sober, avoid drugs and fights, particularly gang-related fights, to avoid

altercations with teachers, and to display some modest propensity toward learning what the schools have to teach.

With their Lockean assumptions about personal dignity, Rousseauian assumptions about human perfectability, and soft personal relations, schools are not very good at dealing with rebellious and recalcitrant youth, some of whose lives revolve around aggression and delinquency and whose distorted sense of distributive justice leaves them attributing their bad behavior to anyone but themselves. Okey's (1990) dropouts talked open about their teacher-baiting, propensity to get drunk at noon and then return to school, drug dealing, skipping, unwillingness to do any work, and fighting with other students. For schools faced with one or several or hundreds of these youth, dropping out solves a most serious problem.

Is School the Solution?

Having suggested that dropping out is not a problem but a solution for dropouts, dropouts' families, and schools, let us turn to a more conventional view that dropping out is a personal, social, and economic problem and examine whether the school has the solution. Schools have solutions, no doubt. They can treat the dropout issue the way they treat any issue. Schools are bureaucracies, bureaucracies specialized and differentiate, and the "dropout issue" can be specialized and differentiated.

Schools can identify the problem and the target population. They can allocate specialists, provide them time and resources, and write new standards, expectations, and criteria so that some success can be attained. This is the way schools treat special education, teen pregnancy, remedial reading, honors and advanced placement classes, alternative and adult education, football, instrumental music, and marching band. "At-risk youth" will be, in many places already is, another in a long line of particular issues that require intensive activity and increased resources. Patterson (1990) and others have documented such programs and their partial success. However, the approach may be frustrated by the difficulty of early identification. Tomlinson, et al., (1992) reported that "even among those population groups with high dropout rates, only a minority of students drop out . . . most students "at risk" of dropping out--based on their background or prior experience or behavior--do not drop out" (p. 8). Indeed, several of Okey's (1990) families had another child doing reasonably well in school.

In addition to the difficulty of early identification, increasing state-graduation requirements are a barrier to the usual bureaucratic way of solving a problem. Left to themselves, schools could alter requirements and expectations and perhaps graduation rates. But they are losing flexibility with students with whom they most need it. Schools are increasingly constrained by impatient state legislatures demanding more uniform and stringent requirements that reduce opportunities for programs that schools might use to keep the non-academically inclined in school. So schools are caught: by a reform movement which is demanding increased effort from the least willing, by families with low aspirations that hand over adult status to their children early, by bureaucratic processes that many

students find intolerable, and by the majority of parents who want schools clean, quiet, and trouble-free. Thus constrained, the school does not, can not have the solution to dropping out.

Dropping out is a problem: agreed. It is a problem primarily because those who do it are those most likely to remain at society's social and economic margins and be denied the equality essential to a democratic society. But it is not a school problem. It is a phenomenon that shows up in youth of school age and that is associated with school. But it should not be viewed solely as a school problem. It is a social problem, a class problem, an economic problem, a host of family problems, and a set of aggregated personal problems. The school cannot address those problems that lead to dropping out and, therefore, the school cannot by itself address dropping out.

What Do We Need to Know?

The dropout issue is serious. It has implications for economic, personal, social, judicial, and egalitarian issues. But it should be taken outside the school and placed in a broad context that encompasses the transition to adulthood that begins around age 14 and continues until age 26. Dropout thinking should take into consideration extended training needs for all youth, extended opportunities for training and education, the cultural diversity of the population, and the solutions that those who drop out work out for themselves. We need to place the transition to adulthood in a larger and longer context and better understand the discontinuity occasioned by dropping out. We need to know what dropouts do after they dropout.

It is not true that they automatically wind up unemployed, in prison, or on welfare. That is an inaccurate stereotype that schools project. We need to know more about the families of dropouts because it is in the family that a child puts the pieces of society together. We need to know the effect of labor policies, child policies, and family policies on dropping out. We need to think broadly of the way people create their transitions. We need a longer, more synchronized and less school-bound and more realistic view of the matter. Mainstreamed thinking that places the dropout issue at the school door and looks for school solutions will continue, but schools have gone about as far as they can go in reducing dropouts and if further progress is to be made, a different line of research and action have to be adopted. That is not to deny the past success of teacher training, school restructuring or curricular and program changes. But with this last 25% of the 18-year-olds and 11-12% of 27-year-olds, a different and enlarged approach is needed. Initial research might focus on the following questions:

1. What paths do those who leave school early take? What happens to them in the armed service, entry-level jobs, community colleges, and other training programs?

2. What part of the dropout population comes from families that are making

steady educational progress? What part comes from families which have never succeeded in school and are passing on anti-school/ anti-education biases to their children?

3. What is the difference in knowledge between those who leave early and those of similar background who stay? What does the latter group know that the former group does not?

4. Can time in the bureaucratic and, to some, troublesome school be reduced without cost to knowledge and skills?

5. Are broadly coordinated apprenticeship programs feasible? Is morecoordination between school and workplace feasible? Might dropouts be better served by getting them out of school and into work earlier?

Research Strategy

Researchers and policy makers who want to increase the high school completion rate and hence the knowledge and skill level of the youthful population should stop focusing on high school dropouts and high school dropout prevention programs and should think broadly about the transition to adulthood that begins around age 14 and goes on for up to 10-12 years. The dropout figures, per se, do not tell us very much about that transition nor does the continued repetition of the dropout rate, which has been consistent for 25 years, help.

What is needed is a focus group assigned to think broadly about the issue and to draw on the array of already-conducted or ongoing research which will illuminate the matter. The focus group will gather information from labor statistics, welfare programs, the census, as well as school records. The assignment will be to talk broadly about the way young people become productive adults. Dropouts will be an important focus because they tend to be the ones for whom the transition is problematic. The group will devise studies or rework extant data to fill in the story. It will describe how all types and classes of young people make the transition and so will place dropping out of high school in a broad perspective.

The specific research focus will be developed as the broad thinking continues, as data is gathered and as information deemed important is seen to be absent. In the long run--five to ten years--the number of young people who leave high school in fewer than four years may not diminish but we may develop more productive and useful notions of how to help them move into adulthood. The research arm of the Department of Education is the ideal agency to sponsor such an effort.

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APPENDIX B

HIGH SCHOOL COMPLETION AS A MOTIVATIONAL PHENOMENON: A RESEARCH PROPOSAL

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My task is to try to cast National Goal #2 (high school completion) within a motivational framework. That is, if one were to come up with a research agenda on the high school dropout problem that was specifically guided by motivational concerns, what would be the focus of such research and what would it hope to accomplish to address the problem at hand? Perhaps a good place to begin is to indicate what psychologists who study motivation are interested in.

Motivational psychologists try to understand why people think and behave as they do. Applied to academic achievement contexts, we would be addressing motivational concerns if we were to ask, for example: Why do some students work to task completion despite enormous difficulty, while others give up at the slightest provocation? Why do some individuals believe that effort pays off and others do not? Or what accounts for the fact that some children set such unrealistically high goals for themselves that failure is bound to occur?

Another way to capture what motivational psychologists are concerned with is to think about a typical achievement behavior, such as studying for an exam, and to view it as a temporal sequence that is started, energized, sustained, directed, and finally terminated. Motivational psychologists would want to examine what the individual is doing, or choice behavior; how long it takes before an individual initiates the activity, or the latency of behavior; how hard the person actually works at the activity, or the intensity of behavior; how long the individual is willing to remain at the activity, or the persistence of behavior; and what the individual is thinking or feeling while engaged in the activity, or cognitions and emotional reactions accompanying the behavior. Note that this is quite different from the study of performance, which has to do with what has already been or is being learned. Educators sometimes confuse the goals of psychologists who study motivation with those who study performance.

The study of high school completion fits within this framework of a motivational approach to achievement-related behavior. For the vast numbers of students who are at risk for dropping out, either because of a history of academic failure, economic concerns,

marriage, teen age pregnancy, or some other competing circumstance or need, the decision to remain in school until graduation in many respects is a problem of persistence in the face of difficulty. Thus we now have to ask what principles from motivation theory and research can help us understand the factors that facilitate or inhibit one's willingness to persist to high school completion despite the enormous difficulty that goal sometimes entails.

Obviously there are as many answers to this query as there are dominant conceptions of motivation. Judging from the prevention and intervention programs referred to in the Challenge 3 report (Tomlinson, Frase, Fork and Gonzalez, 1992), about the only motivation principle guiding these programs is simple reinforcement: individuals are tangibly rewarded if they attend school and punished if they do not. However, this approach neglects the vast amount of contemporary motivation research that is much more cognitive in nature (see, for example, Weiner, 1992).

By cognitive, I mean an individual's representation of his or her environment -- that is, perceptions, inferences, and interpretations of social experience that determine achievement strivings such as persistence. For example, given monetary rewards for completing a semester's worth of graduation requirements, a motivational psychologist guided by cognitive theory would be concerned with how the student interprets such incentives to make inferences about his own ability: Is my teacher rewarding me because she believes that I am a capable student? Or is she simply trying to appease me or protect my feelings because she does not expect very much of me? Obviously these questions imply a complexity much greater than the mere tracking of increases in desired behavior or decreases in undesired behavior as a function of reward contingencies.

Most contemporary cognitive motivational theories represent some derivation of what are known as expectancy X value theories: motivation, or in this case persistence, is determined jointly by one's expectations, or the perceived likelihood that goals will be attained, and the value that one attaches to that goal. Often we think of these two factors as multiplicatively interrelated -- that is, without some perceived likelihood of attaining one's goal and some value associated with goal attainment (i.e., if either factor is equal to zero), there can be no motivation or movement toward the goal. For example, some dropouts may choose to leave school before graduation because they do not sufficiently value a high school diploma even though they have the confidence that they could attain it. Other early departers, in contrast, may attach a great deal of value to finishing school, but perceive their chances of ever achieving this goal as very slim. One of the challenges facing motivational psychologists is to determine how the interrelated factors of expectancy and value operate in particular contexts to predict achievement-related behavior such as persistence to high school graduation.

Let me begin by discussing expectancy for success and how this relates to the motivational problem of high school retention. I think there are three important questions around which a program of research could be developed. These are: (1) What are the

factors that influence high or low expectancy among high school dropouts and those at risk for dropping out? (2) What kind of expectations do dropouts and those at risk actually report? Are they realistic, that is, guided by one's prior performance history, versus overly optimistic or pessimistic? and (3) What is the relationship between expectations for success and future achievement outcomes? That is, are expectancies good predictors of whether or not kids at risk for dropping out will actually remain in school?

I. The Determinants of Expectancy

What determines whether someone has high or low expectations for success? Among the most important determinants are self-perceptions of ability, or the belief that "I can" or "I cannot" (e.g., Bandura, 1977). Ability self-percepts are part of a larger class of cognitions about the self that we label causal attributions, or judgments about why outcomes occur (Weiner, 1986). For example, imagine two potential dropouts who fail a required course for graduation; one student attributes the failure to low ability and the other student attributes it to lack of effort.

These two attributions have very different consequences for future expectations and subsequent achievement strivings. We tend to think of low ability as a characteristic of ourselves, enduring over time. and not subject to personal control. The person who fails and attributes it to low ability is likely to expect failure to occur again and to believe that there is no response in her repertoire to alter the course of failure. Hardly a more debilitating motivational pattern is likely. This is in contrast to lack of effort which is perceived as varying from situation to situation and under the person's control. People who attribute failure to lack of effort therefore need not expect failure to recur since effort is modifiable by one's own volitional behavior.

There is a lot of evidence that students who attribute failure to low ability have low expectations for the future and therefore do poorly in school (Graham, 1991). If this is the prevalent belief structure of dropouts or potential dropouts, then we need programs of research that examine where these beliefs come from, and how they get communicated to the student and sustained over time. In my own research with grade school children, I have been examining how teachers in the classroom might be communicating low ability to students (Graham 1990). I have been able to identify at least three prevalent teacher practices that might indirectly and unintentionally be communicating low ability to students. These practices are excessive praise for success, particularly at easy tasks; unsolicited offers of help; and emotional displays of pity and sympathy. Students who receive pity from their teachers when they do not do well, get offers of help when they have not asked for it, and who get too much praise when they succeed (and not enough criticism when they fail) are vulnerable to self-perceptions of low ability. I am convinced that such teacher communications are unintended, that they are subtle and indirect, and they manifest themselves differently at all age levels of schooling, including high schools and special programs for the academically at risk.

I would recommend systematic classroom observational studies with the goal of documenting the extent to which these kinds of practices are prevalent in classrooms of students who are at risk for dropping out. I would like to see similar observational studies in the various "pull-out", alternative, or dropout prevention programs for students who already have been identified as having difficulty making it in the regular classroom. In the "Challenge 3" report, I was struck by how little apparently has been done to evaluate programs specifically designed to deal with the problem and how simplistic the programs are in terms of motivational principles.

From a motivational perspective, we need to also evaluate the programs with regard to the self-perceptions they foster in students. Henry Levin of Stanford is probably correct in his belief that many programs for at risk students err in the sense that they do not demand enough of the students and in so doing, communicate low expectations (see Levin, 1987). This is of course entirely consistent with the argument that some teacher practices, designed to protect the self-esteem of failure-prone students, might subtly be communicating low ability to students. If we could come up with a descriptive taxonomy of both appropriate and potentially detrimental teacher practices directed toward at risk students, this would also have important implications for teacher education. Far too often, the good-intentioned teachers of at risk populations come to the classroom ill-equipped to deal with the psychosocial needs of their students.

II. Attributions and Expectations of Dropouts

In addition to research on antecedents, systematic studies are needed on the content of dropouts' beliefs about the factors related to early school withdrawal and how these beliefs relate to (are predictive of) future expectancies. In this case I refer to expectancy as the perceived likelihood of returning to school. In the Challenge 3 report, the major reasons that dropouts report as causes of leaving school are listed. Although this is potentially valuable information, I could not ascertain any attempt to organize these reasons or to classify them into some higher order categories that might tell us something about the future prospects of respondents. Intuitively, for example, one might assume very different outcomes for the dropout who departs because of perceived teacher insensitivity in his present school versus someone who withdraws early because of self-perceived inability to complete the work.

Attribution theory is a cognitive motivational theory that provides a framework within which to systematize the perceived causes of early school withdrawal. Without going into extended detail here (see Graham, 1991; Weiner, 1986), let me just indicate that we can use this conceptual framework to classify the reasons for dropping out according to three underlying dimensions of causality that then have important motivational implications:

First, we can ascertain whether causes are perceived as internal to the dropout (e.g., low aptitude) versus external (e.g., teacher prejudice). This has important consequences for the self-esteem of the individual. Failure (i.e., early school

withdrawal) attributed to internal causes results in lower self-esteem than when the same outcome is attributed to something external to the student.

Second, it can be determined whether causes are stable and enduring over time (e.g. an unplanned pregnancy) versus temporary and changing (e.g., short-term illness) which then has direct implications for future expectations. Stable causes for failure lead to lower expectations for future success than unstable causes.

Third, the causes that dropouts report can be classified as personally controllable (e.g., lack of effort) versus uncontrollable (e.g., financial needs) which then has implications for feelings of guilt and other moral self-evaluations. Guilt should follow a self-attribution to personally controllable factors and this emotion then often functions as a motivator of achievement strivings. In sum, according to this analysis, it would be motivationally most adaptive to attribute dropout to some factor that is internal, unstable, and personally controllable.

To better understand the way dropouts perceive their causal world, we need systematic studies that focus on the perceived reasons for early school withdrawal. Related questions about self-esteem, expectancy, and affect should also be assessed. Participants in these studies should then be followed to ascertain who eventually returns to school and who does not. In this way it might be possible to relate persistence (to high school graduation) back to causal beliefs and expectancies.

III. Relationship Between Expectatons and Achievement

The approach suggested above might be particularly important and illuminating with African American students who, by all indications, are over represented among those at risk for dropping out of school. But there is a paradox in research on the relationship between expectations and achievement among black students. Despite hypotheses to the contrary, black students report high expectancies for future success even when achievement outcomes indicate otherwise (Graham, 1992). That is, they tend to self-report the expectation that they will be successful in the future somewhat irrespective of whether they have succeeded or failed in the past. This pattern of positive expectations is evident whether studies are assessing academic and vocational aspirations such as beliefs in the likelihood of attending college or attaining a high status profession, or expectations for the future following success and failure on specific achievement tasks.

Whether this self-reported optimism also characterizes dropouts and potential dropouts is not yet known, but it could be an important factor in uncovering some of the cognitive factors that lead to early school withdrawal. Maintaining unrealistically high expectations possibly means that one is not adjusting one's goals or ways of approaching achievement tasks based on prior performance. Such findings also highlight a dilemma for the motivational psychologist, for it is unclear then how to relate expectations to achievement strivings among African Americans if the assumed relations are not present. Are we to assume that black students who are at risk for leaving school before graduation have high

expectations for success when all of their behaviors indicate otherwise? If so, then what are the positive correlates (predictors of) dropping out or staying in if expectancies are not a likely candidate? We therefore need programmatic research aimed at understanding the relationship between expectations and outcomes among African American students at risk for early withdrawal from school. Beginning with a fine-grained analysis of the perceived causes of dropout as they relate to factors associated with returning to school seems to be a reasonable first step toward achieving this broader goal.

IV. Values

Unfortunately, the most chronic and pervasive motivational problems are evident in students, like many at risk for dropping out, who appear not to want to learn, not to want to try, and who have not internalized society's attitudes about the importance of learning, schooling, and mastery. The question thus shifts to the larger and more difficult one of values, the second major determinant of motivation introduced above.

The study of values has proven to be an elusive and unwieldy topic in the general psychological and sociological literatures, with many unexpected and unexplained sets of findings dominating the research. The same appears to be true with what little research examines achievement values of dropouts and potential dropouts. From what I can ascertain, these populations of students report the same kind of achievement values as do their more successful and conforming counterparts (e.g., Tidwell, 1987). That is, they overwhelming endorse the belief that learning is important to success in life, that doing well in school maximizes one's chances for positive outcomes, and that they would not advise siblings or close friends to drop out of school.

Such findings do not suggest that most students, whether successful or not, share the same values, or that values are not important predictors of motivational constructs such as persistence. Rather, such findings suggest that we need a new and different approach to the study of values, one that focuses on what I will refer to as the morality of achievement strivings, or the "should" and the "ought" of staying in school. Necessarily, this approach will incorporate attention to perceptions about peers, for one of the best ways to find out about the values of adolescents is to ask them what they believe their friends would think, feel, or do. Furthermore, there is growing evidence that the discrepancies between values and school performance, including parental values, is so striking among African-American high school students precisely because of the influence of peers (Steinberg, Dornbusch, & Brown, 1992).

Consistent with the kinds of motivational principles talked about here, one way to begin to get at the achievement values of students at risk for dropping out is to examine their beliefs about the meaning (morality) of effort. It is considered "morally upright" in this society to try hard and stay in school and immoral to expend little effort and subsequently drop out. I would guess that part of the reason students drop out is that they do not perceive any moral obligation to remain in school, they do not see school as instrumental to

long term goals, and they do not think that their peers value school-related effort. But we need research methods to assess this hypothesis that are not fraught with social desirability and the demand characteristics involved in directly asking students whether or not they value effort and hard work.

It is not entirely clear how this can be accomplished, but I recommend that we begin with simple judgment studies related to the "ought" and "should" of school attendance and that tap self-perception as well as the perceptions of others, especially peers. For example, one might present students with scenarios such as the following:

> *On withdrawing from school, imagine that you leave with a GPA in the "C" range ["D" or "F"]." You attained this GPA either because:*
>
> *A. You have high ability but never study.*
> *B. You studied and did the best you could given the circumstances.*
>
> *1. Which of these students would you rather be?*
>
> *2. Which of these students would be more popular with your peers?*
>
> *3. Which of these students would your parents prefer you to be?*
>
> *4. Which of these students would feel more "fulfilled" [proud, bad about themselves]?*

Alternative A above depicts the student who does not want to be perceived as low in ability even if it means endorsing the belief that effort is not valued. Alternative B describes the student for whom trying one's best is most important regardless of the outcome. Such questions could be asked of dropouts, those at risk for dropping out, and those who have returned to school. One might predict that a preference for fulfilling one's capacities (alternative B) should be related to school retention or returning to school. Furthermore, one could assess the degree of conflict between one's own preference and the inferred preference of peers as an index of the conflict that high school students experience between their own values and the perceived values of the peer culture. One could devise numerous variations on this paradigm, all of which would have the common theme of examining the perceived role of effort in achievement strivings. I think this is the key to unlocking the issue of values and their relationship to school persistence.

V. Specific Research Agenda

Having provided a framework for how one might conceptualize high school retention as a motivational phenomenon, I will conclude this paper by outlining a general research agenda based on these ideas. I think three types of studies are needed: (1) studies on

dropouts themselves; (2) studies on those at risk for dropping out, beginning with early identification in the first few years of elementary school; and (3) large scale intervention studies with the goal of motivational change. Each of these research foci is addressed in turn.

A. Studies on dropouts

In my mind, it is not possible to fully understand the dropout problem from a motivational or any other perspective without more attention to the early school departers themselves. Within a motivational framework, we are particularly interested in the kinds of causal beliefs they hold about why they left school, the emotions accompanying these beliefs, and their expectations for future outcomes. I think we need to identify a national sample of high schools where the dropout rate is high. This would not be difficult to accomplish in Los Angeles, for such statistics receive quite a bit of public scrutiny). The schools should be geographically well distributed, representing a range of ethnic groups (I am assuming that low SES schools would have to be greatly over represented). As part of the school withdrawal process, early departers would be requested (perhaps paid) to participate in an in depth interview with trained research assistants experienced in working with high school students. The substance of the interview would assess their causal beliefs about their school performance, the reasons for leaving, emotional reactions, expectations for the future -- in other words, the kinds of variables introduced earlier in this paper.

I anticipate a large enough sample (i.e., a few thousand) who could then be tracked over time. Information could be gathered, for example, about whether and when they returned to regular school, whether they completed a GED, vocational training, etc. The goal of this study would be to relate beliefs about the causes of early school departure and expectancies to subsequent adaptive and maladaptive outcomes. If we find, for example, that a significantly larger number of students who never return to school are those who attribute their leaving to internal and uncontrollable factors such as low aptitude, then this has implications for intervention programs for at risk students that are based on the notion of changing causal beliefs.

In a subset of these same high schools, we also need classroom observational studies that examine the behaviors of teachers and how these might relate to personal beliefs of those on the verge of dropping out. I already indicated in an earlier part of the paper some of the teacher behaviors that might subtly be communicating low ability to students (e.g., excessive praise, unsolicited help, displays of pity). Classrooms should be observed and coded for the frequencies of these and other potentially detrimental behaviors. Jacque Eccles and her colleagues at the University of Michigan have provided a model for this kind of research in their own longitudinal work on the motivational effects of the transition from elementary to junior high school.

Finally, studies are needed that evaluate the various dropout intervention and prevention programs using principles from motivation theory. For example, how do beliefs about the self change as a result of participation in one of these programs? From a

motivational perspective, the most successful programs should be those that enhance the belief in one's own efficacy, raise expectations (or at least, make them more realistic), and encourage a belief in the instrumentality of academic effort. Assessment of the kinds of activities that take place in these programs should be carried out to examine the extent to which these goals are being both attended to and accomplished.

B. Studies on young children at risk for dropping out

Being at risk for early school withdrawal is not something that necessarily emerges only at the onset of adolescence. And the kinds of adaptive or maladaptive motivational beliefs suggested here are known to emerge early in the grade school years and to shape much of the child's later school experience (see Dweck & Leggett, 1988). This suggests that addressing the dropout problem also means the early identification of those most at risk and the examination of their psychosocial context from a motivational perspective.

To address this goal, longitudinal studies are needed that follow at risk children from the time they enter first grade until they either drop out or graduate from high school. Where this study would differ from other longitudinal investigations is that the focus would be particularly on the development or inhibition of adaptive motivation (rather than, for example, actual school achievement which is the traditional focus).

Motivational psychologists believe that most children begin the formal schooling process wanting to learn, valuing effort (or at least enjoying the praise that is associated with adopting the work ethic), having confidence in their abilities, and by and large, enjoying the activities of school (see Stipek, 1984). But sometime in the middle grades of elementary school, and apparently somewhat independent of ability level, these same motivational variables are known to differentiate those students for whom school continues to be enjoyable and a positive experience from those for whom school becomes the negative experience that often is a precursor to early withdrawal.

For example, Carol Dweck and her colleagues differentiate children as helpless versus mastery-oriented based on their predominant motivational pattern (Dweck & Leggett, 1988). According to this analysis, helpless children act as their label implies; they display a helpless response pattern to academic challenge. That is, they focus on personal inadequacies, often make spontaneous attributions to lack of ability, express negative affect including boredom and anxiety, and show deterioration in actual performance (i.e., they are unwilling to persist on difficult tasks). Mastery-oriented children, in contrast, focus on the task rather than their abilities, often avoiding attributions altogether; they display positive affect indicating enjoyment of academic challenge; and they generate solution-oriented strategies that lead to persistence in the face of imminent failure.

We need studies that track the emergence of these kinds of distinct motivational patterns. An untested hypothesis worthy of examination is that adolescents who eventually drop out of school are more likely to display a helpless pattern of beliefs and achievement-related behavior. It would be important to know when this pattern begins to emerge, what

factors in the school environment contribute to it, and how the student ultimately copes with a helpless orientation.

I use the helpless vs. mastery orientation distinction as an illustration of the kinds of variables that would be examined, although clearly we do are not obliged to adopt this particular framework. A more important concern is the general methodology. We need to identify a sample of, say, 200 at risk children when they enter first grade. Regular motivational assessments (i.e. beliefs about ability, affect, beliefs about effort) would be made throughout the elementary grades. This would be supplemented with achievement data, family background data, classroom observations, peer perceptions, and whatever other pertinent data we might be able to collect over an extended time period. What we would hope to be able to come up with is a motivational profile of the at risk student who stays in school, to contrast with the motivational profile of his or her counterpart who opts for early withdrawal. With regular assessment over the grade school years, we should also be in a position to better understand some of the factors that lead to disparate motivational patterns.

C. Motivational change

A key question for those of us concerned with the issues discussed throughout this paper is motivational change -- that is, how to get students to enjoy learning, to feel good about themselves, to value effort, etc. Despite the importance of this topic, not since the middle 1960s with David McClelland's work on the achievement motive (e.g., McClelland, 1972) have there been any large scale, federally supported research projects dealing specifically with motivational change. Given the severity of problem and the central role that motivation must play, the time seem ripe for OERI to take the lead and support a program of research with the specific goal of motivational change.

What would we set out to change? Because our cognitive approach to motivation highlights the importance of thoughts (e.g., causal beliefs), the focus should be on changing beliefs as a necessary antecedent to changing behavior. The principles about attributions and expectancies all too briefly referred to above provide specific direction along these lines. Thus, increasing realistic success expectancies, altering attributions for dropout from stable to unstable or from uncontrollable to controllable factors, and changing teacher classroom behaviors so that they do not emphasize low ability comprise some of the principles that could be used to enhance motivation, or increase persistence to degree completion. From laboratory motivation research, we have successful models for changing causal beliefs that could be incorporated into large scale intervention efforts in schools (see Forsterling, 1985).

If we target at risk children in the earlier grades, we might consider training programs that focus specifically on changing causal attributions for failure from low ability to lack of effort. This then should lead to higher expectations for success and greater persistence in the face of failure. In so doing, the goal would also be to increase the perception of an

effort-outcome covariation: children should be trained to see that greater effort results in desired outcomes. In the process, children should also be trained to recognize and value the tangible results of increased effort such as greater acceptance on the part of teachers, higher status in the classroom, more autonomy in learning, etc. I think that I have barely scratched the surface here, for there are a whole host of well-established motivational principles in the literature that await to be implemented in the context of large scale intervention.

We obviously need a structure for such an undertaking. As a first step, OERI should sponsor an extended conference that would bring together a number of motivational psychologists of like mind and commitment. The purpose of this conference would be to tap into the collective wisdom of the leading motivational researchers in our nation's universities with the goal of articulating a well-defined research agenda. Next, steps should be taken to establish a national Center for the Study of Motivational Change. Housed in one or more universities, this Center should function as an organized research unit with the resources to coordinate and fund a number of large scale projects committed to increasing school performance and retention through motivational change. This clearly would constitute high risk intervention research, with an unknown but potentially exciting payoff.

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APPENDIX C

RESEARCH AGENDA FOR ACHIEVING GOAL #2[1]

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I. INTRODUCTION

This paper proposes an agenda of research for attaining National Goal #2: Achieving a high school graduation rate of 90%. The proposed agenda relies on material in Fork, Frase, Gonzalez, and Tomlinson (1992) and rests on four premises:

1. The nation may be close to achieving the goal (the high school graduation by one indicator was 82% in 1990), but research on how to close this gap will be complex and require substantial long-term effort.[2]

2. Measuring high school graduation rates is somewhat problematic. One must choose which indicator(s) to use -- event rates, status rates, or cohort rates. If using status rates, which age groups should be included? If using cohort rates, which cohorts? Should only one indicator be selected and all research directed to it, or should research proceed simultaneously on several indicators? If one indicator must be chosen, we recommend a status rate for 20-year olds, and that "high school graduation" be construed to represent completion of education beyond 8th grade that adequately prepares the student for productive employment or higher education. This indicator does not require that students complete such education in conventional comprehensive high schools or that they complete this preparation within four years of leaving 8th grade. The proposed research agenda

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[1]Prepared for the Office of Educational Research and Improvement, U.S. Department of Education. The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the supporting agencies. The authors are grateful for assistance received from William Clune, Michael Olneck, Andrew Porter, and John Witte.

[2]The estimate is based on material summarized by Fork et al. (1992) for 19-20 year olds in 1990. The just-released National Education Goals Report (1992) gives a completion rate of 85% for 19-20 year olds in 1991, and a rate of 86% for 1990. Some of the differences in these estimates may be due to the fact that the goals report does not include students of this age still enrolled in school.

assumes use of this indicator, and the rationale is explained more under Assumption 3 below.

Using only this indicator, however, is likely to present problems for both research and policy. To learn more about why students stay in school or leave, we need yearly data on student enrollment and dropout, as well as cohort data that track particular groups. To be most useful, student data of this sort must be connected to identifiable schools and districts. If research on the national goal requires collection only of status data that can be gained through census reports, schools and districts might reduce efforts to identify actual and potential dropouts and even reduce their efforts to keep all students engaged in their schools. Thus, there should be serious discussion among researchers and policymakers on the implications of using any single indicator to measure progress toward Goal #2.

3. Achieving a 90% high school graduation rate will not serve the nation well unless graduation itself represents student engagement in academic work of high quality. Student engagement is defined as a psychological investment in and expenditure of serious effort toward mastery of important knowledge and skills, in contrast to merely complying with school procedures required for earning a credential.

4. Findings from the proposed research will not always suggest immediate implications for policy or program development. Some research should focus at the outset on specific issues of policy and practice, but a significant portion of the work should begin with more basic theoretical issues. Theoretically grounded studies may ultimately have the most significant implications for policy and practice, but the planning of this research should not be constrained by policy questions as currently defined (e.g., Does revocation of dropouts' drivers license keep potential dropouts in school?).

The paper is organized into three sections. First we discuss three substantive themes which specific studies ought to address. Then we outline five types of studies that could speak to the themes most productively. Finally, we comment on the organizational structure needed to support this research agenda.

II. MAIN THEMES

The three themes discussed below outline a substantive agenda for research on Goal #2. The themes can be pursued through diverse methodologies, but the overall program of research should be coordinated to ensure that each of the themes receives concentrated attention. At periodic intervals OERI should undertake activities that summarize findings related to each theme and that discuss implications of the findings for theory, for practice and for policy related to the engagement of students in schooling.

Theme 1. Testing assumptions implicit in the goal of 90% high school graduation.

The goal of a 90% high school graduation rate appears unambiguous and certainly measurable. However, a research program undertaken to achieve the 90% goal only in a literal sense could produce unfortunate results.

One such result might be the reduction of academic standards for high school graduation which is one possible strategy for achieving the goal. To test the strategy, researchers might use survey data to further examine the effects of academic standards on the graduation rates of different groups of students. Researchers might also conduct experiments where selected schools deliberately lower or raise standards. Such research, consistent with literal interpretation of the goal, would not be consistent with the spirit of the goal as most understand it. We assume that the nation is not aiming to achieve the goal at the possible cost of reducing the quality of education represented by a high school diploma. The example illustrates that if research pursuant to the goal is to be useful, important assumptions that lie behind the goal should be clarified and tested. Otherwise, research could be misleading and/or harmful.

Examples of other significant assumptions that seem connected to the goal, but may be problematic and ought to be investigated are given below.

Assumption 1: We need to find a way to motivate all adolescents to put high school graduation at a higher priority than other pursuits that compete for adolescent engagement. Problem: What about adolescent parents and adolescents who spend much of their time earning money and caring for dependent siblings and other dependent relatives? Should potential dropouts who find themselves in these situations abandon their families in order to complete high school?

Assumption 2: High school graduates with no further education will earn more than dropouts. Problem: In general, earnings increase with educational attainment and dropouts often entail more costs to the society in social services than graduates. However, it is possible that a significant proportion of the dropout population (e.g., those who earn in the top half of their distribution or those in the top half of school achievement within their distribution) fare no worse economically and socially than their counterparts among high school graduates with no further education.[3] There is dispute about the projected demand for workers with only high school diplomas. Due to projected decline in the percentage of white males from affluent backgrounds in the labor force, increases in the demand for workers could lead to higher wages for both low and high skill workers. This demand, plus business initiatives to retrain dropouts could minimize economic disparities between dropouts and high school graduates with no further education. Finally, for those dropouts

[3]Olneck and Kim (1985) discuss this possibility in their analysis of the income for dropouts and high school graduates, using data on men from the 1962 and 1973 Occupational Changes in a Generation Survey.

who do suffer adverse employment and income consequences, little is known about how these consequences arise in the labor market. We know little for example, about the extent to which the adverse consequences arise from genuine deficiencies in human capital that could be mitigated by lengthier schooling for the actual dropout population.

Assumption 3: Compared to graduates, high school dropouts lack important cognitive knowledge, skills and values which makes their lives as workers, citizens, and persons less meaningful and rewarding. Problem: Research indicates that high school completion is no guarantee for success in the workplace, in civic life or in personal affairs. Furthermore, patterns of development from childhood to adulthood are diversifying: youth take on responsibility for family care at different ages; they participate in diverse forms of education at different ages throughout life; and they enter and withdraw from the labor market in different career stages. In short, the significance to productive adult life of earning a conventional high school diploma according to a standard time-frame within a standard socialization pattern is changing and becoming less clear. In response to changes in socialization, an increasing array of specialized educational services are offered or being developed (e.g., programs targeted toward groups like adolescent mothers, instruction aimed at the GED examination, business-sponsored career training, tech-prep programs). Dropouts have successfully pursued alternative forms of education outside of high school, and many of the emerging alternatives (e.g., certificate of initial mastery) may deliver educational quality equal or equivalent to the conventional high school diploma.

From this perspective, Goal #2 should probably be construed as achieving a 90% rate of students who complete educational programs, in whatever organizational form, that give them adequate preparation for higher education or for work by a given age (20). Research on Goal #2, therefore, should be tied to research on goal 3 in the sense of developing new knowledge on how to retain students, not just in any school or program, but in quality educational programs.[4]

If Goal #2 is construed in this way, dropout rates observed to date underestimate the problem, because many students complete high school with inadequate education. The research agenda now becomes more complex than studying factors that influence high school completion across all high schools. Instead, there should be an attempt to study retention and dropout rates among schools or programs that do in fact offer adequate preparation for most of their students. How to assess "adequacy of preparation" poses a special problem for this research, because there is much disagreement about standards for adequate or high quality educational preparation (Newmann, in press).

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[4]We assume that "school" can represent a variety of possible educational programs; it should not be constrained to the form of high schools as we know them. References to school or program in this document should, therefore, include programs that occur outside of conventional high schools and that may be operated by community based organizations, vocational schools, businesses, and other agencies trying to offer general education to students of secondary school age.

The point here is not to restrict research on dropouts only to those schools that have high quality programs, but to insure that research takes the adequacy of academic preparation into account.

Assumption 4: Achieving a 90% graduation rate will help to achieve more equality of educational opportunity in the society, because a larger segment of the population will begin on a "level playing field." Problem: Educational history indicates that as overall educational attainment increases, society is likely to "raise the ante" to produce new standards of educational sorting and stratification (e.g., higher status and rewards for graduate degrees and for graduates of elite versus common universities). The new standards can perpetuate disparities in income and opportunity similar to those that existed prior to achieving a 90% high school graduation rate.

Assumption 5: In reaching the goal of a 90% graduation rate, potential dropouts should receive services that offer all an equal chance to complete high school. Does this imply that the rate should reach 90% for all racial/ethnic and socioeconomic groups? Problem: Some students are harder to reach than others, and some are more likely to benefit from completing high school than others. Those students more difficult to engage will probably require more resources. If some interventions are discovered to be successful with certain groups of students, which groups should be targeted? Fork et al. (1992) argue that to reach the goal of 90%, it will be necessary to focus on mainstream white students who make up about 2/3 of the dropout population. It is likely that most of the mainstream dropouts come from schools where only a very small proportion dropout.[5] Would it be more efficient in cost per student to concentrate interventions in schools with high concentrations of dropouts -- those more likely to serve minority and disadvantaged students? It may be difficult to mount school-level efforts to reach very small numbers of students per unit. In contrast, Hispanics compose less than 15% of the total dropouts, but their ethnic dropout rate is 35%. What are the consequences for equity of focusing on some groups rather than others in order to reach the 90% goal?

Assumption 6: To reach the 90% high school graduation rate, interventions and research will need to concentrate primarily on young adults who have left high school and programs implemented at the high school level. Problem: Fork et al. (1992) have summarized studies that locate the origins of dropping out well before high school. Experiences in elementary and middle schools, along with family and peer experiences in

[5]Fork et al. (1992) estimate that to meet the 90% goal (status group of 19-20 year olds in 1990) it would have been necessary to graduate 620,000 more students that year. Distributing these across 20,000 high schools would have meant 31 students per school. However, if reaching the 90% goal is seen largely as a set of interventions throughout k-12 schooling, as recommended by the review of Fork et al. (1992), these 620,000 students per year could be distributed across the nation's 110,000 schools. This would give an allocation for each school to save 6 potential dropouts.

pre-adolescent years establish the student's sense of future opportunity, confidence in one's ability to succeed in school, and willingness to trust school professionals enough to follow their instructions. To make progress with high school retention, therefore, it will be necessary to examine students and school programs across the entire spectrum, kindergarten through high school.

To summarize, a major task of research on this goal should be to clarify or "unpack" important assumptions connected to the goal and implicit problems that the goal aims to correct. These assumptions should be identified and examined critically to determine whether they themselves should become critical questions in the research agenda. From the assumptions just presented, it would seem, for example, that questions such as the following ought to be addressed.

1. What are the social and personal costs of moving those dropouts back into school whose decisions to leave were justified economically or in terms of social responsibility to family?[6]

2. What would the dropout rate be if criteria for quality of adequate academic preparation were applied to high school diplomas? What would be the costs and benefits of achieving the 90% graduation rate without applying any new criteria of quality to the programs completed?

3. If the 90% graduation rate were achieved, how would this affect patterns of inequality in further educational attainment?

4. If the goal were to achieve 90% graduation as inexpensively as possible, which group of current dropouts should be targeted for attention, and what would be the implications for equity?

The 90% graduation rate, and other goals as well, are often justified with reference to assumptions about the general social or economic welfare of the nation. Research on the goal should examine these assumptions. As indicated in the issues just raised, one powerful way of approaching this task is to use the lens of cost-benefit analysis in developing human capital. Use of this perspective, infrequently applied in educational research, is necessary to advance knowledge relevant to policy on this goal.

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[6]Getting a job, taking care of family, avoiding unpleasant interaction with school authorities, and avoiding continued failure can all be viewed as reasonable justifications for leaving school. Fork et al. (1992, p.9) summarize some research on student reasons for dropping out.

Theme 2. Understanding how social capital, incentives, school membership, and authentic work interact to influence dropping out or high school completion.[7]

If future research is to be productive, it should be driven by, and oriented to developing theory on student engagement in school. The most promising building blocks of a theory to date suggest that students' tendency to become engaged with academic work or to dropout are a function of four main influences:

(1) Social capital in the form of norms, expectations and networks of communication within families and communities that lead youth to internalize norms to achieve constructive social roles.

(2) Strong, credible incentives for school achievement, especially higher income, better jobs and further educational opportunity.

(3) Schools which, through caring and personalized commitment to students, establish a sense of school membership that legitimates student effort in the work required by school.

(4) Authentic student work; that is, curriculum and instruction interesting and challenging enough to attract student attention and effort.

The first two influences occur external to the school, but are linked to it. The last two occur in the school and are subject to more direct control by the school. But all four theoretical building blocks for increasing student motivation in school are external to the student. That is, the theory suggests that the focus for change and intervention should be to improve these factors, not to change the students themselves. A central thrust of research on Goal #2 should be to understand more about students themselves, especially their motivational development as they interact with these factors in their environment. Below we explain the four building blocks in more detail and comment on the need to understand their significance as a major step in achieving a 90% high school graduation rate.

Social Capital

One strand of research suggests that the explanation for why students drop out of school lies in the characteristics of students, their families and the neighborhoods in which they live. Numerous analyses have linked characteristics such as low income, single parent home and low educational attainment by parents as correlated with students dropping out. The question remains, however, how do these demographic or social characteristics produce a drop out? The concept of social capital offers help to build theoretical understanding of

[7]This section was written by Gary G. Wehlage, with assistance from Fred M. Newmann.

the relationship between individual student characteristics and social influences related to school completion.

As argued by Coleman (1987a; 1987b; 1988), social capital helps to explain how certain characteristics of families and communities affect student success in school. While still theoretically and empirically underdeveloped, the concept can serve as an orienting device to generate hypotheses and drive empirical research that will contribute to a theoretical understanding of school leaving and staying. Coleman identifies three kinds of capital that persons or groups possess in varying amounts. One is financial/physical capital: money and the productive equipment that money can buy to produce goods and services. A second form of capital is human: skills and knowledge, often acquired through formal education, that allow people to act in purposeful and productive ways. The third form, social capital, refers to the social and organizational relationships among people that facilitate collective action. Social capital includes the structure of obligations and expectations that underlie organized, purposeful action. Groups with strong social capital have rich interactions that create an information flow and establish norms that help maintain trustworthy, predictable contexts for organized activity.

Social capital exists in communities, neighborhoods and families. Within families, social capital is developed through interactions between parents and children, and depending upon the quantity and quality of these interactions, families have more or less social capital. Weak social relations among family members fail to communicate shared expectations, norms and sanctions for not meeting the norms. Strong social capital within families is reinforced when a network of adults in the community beyond the family interact through a shared set of expectations, norms and sanctions.

When strong social capital is present in communities, Coleman argues that "intergenerational closure" tends to occur. For example, if parents are friends of the parents of their children's friends, a network of social relations produces a flow of information which makes it more likely that parents and children share expectations and insures more consistent patterns of reinforcement. In contrast, when a parent does not have close relationships with other parents or with community members who share expectations and norms, the openness of this situation leads to confusion and uncertainty in the child about expectations for valued behavior. 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 human capital; that is school knowledge and skills.

While a family might have relatively small amounts of financial and human capital, it can have strong social capital. Conversely, a family may have substantial financial and human capital, but lack social capital if there are weak relations between children and parents. Weak social relations within a family can result from several circumstances: youth allegiance to a peer group with norms antagonistic to adult culture; parents' inability to give time and attention to their children due to work obligations or other sources of

stress; children's lack of contact with positive adult role models and well-functioning adult organizations beyond the family.[8]

A shortage of social capital implies that students will develop ambiguous norms and expectations about schooling, and that some youth will develop norms that undermine and overpower those needed to stay in school and succeed. In contrast, young people who interact with significant adults who participate in communication networks in the larger society and who demonstrate norms that underlie success in the mainstream social and economic system are more likely to graduate from and succeed in school.

Research is needed on how communities develop and sustain the social capital essential for promoting student success in school and on what policies might deliberately assist in the promotion of social capital. Such research needs to examine a wide range of contexts where adults interact with youth and to analyze and speculate upon how schools might coordinate with other community agencies in deliberate efforts to build social capital.

Incentives

It is commonly assumed that the nation's dropout rate and poor showing on achievement tests relative to other advanced nations are products solely of ineffective schools. Complaints from the business sector blame the schools for the inability of young people to perform well in the workplace and to accept appropriate norms of productivity. If the schools are seen as the sole source of the problem, then it follows that the solution lies primarily in reforming the schools. Our discussion of social capital suggest this view is inadequate, and there is also another perspective that offers a powerful analysis of the relationship between schooling and workplace performance.

In short, if one wants virtually all youth to complete 12 years of schooling, strong, credible social and economic incentives are needed from institutions beyond the school. Research on dropout prevention has failed to examine this perspective carefully. The society puts great emphasis on a college education as a ticket to desirable employment. But it is important to consider the implications of this for the motivation of high school age students who do not enroll in college; that is for about 50% of the youth population.

Bishop (1987) argued that the current weak linkage between school and employment has reduced incentives for academic achievement and has undermined effort especially among non-college-bound students. Those destined for college have an economic incentive to work hard in school, but not the non-college-bound group. Knowledge of mathematics, science and communication skills can be related to eventual productivity on the job. But Bishop points out that employers do not examine high school transcripts and do not use

[8]One of Coleman's more provocative claims is that a child living in a single-parent home experiences fewer interactions with adults and consequently has access to less social capital than a child living with more than one adult.

grades or other evidence of academic knowledge, skill or competence to make hiring decisions. Many employers insist on a diploma for employment, but they ignore other academic records. The result, claims Bishop, is low motivation for non-college bound students to achieve or even to stay in high school.

In a different effort to explain why minority children were not motivated to achieve in school, Ogbu (1974) studied a working class and predominantly minority community. He found that children had adopted a pessimistic view of future opportunities based on the employment prospects observed in their community. According to Ogbu, they perceived that a "job ceiling" existed for individuals within their status group. Given dismal prospects for a future career and concluding that school achievement would probably not enhance these prospects, Ogbu's subjects made a "rational" decision not to put much effort into their schoolwork. Similarly, Comer (1988) found that alienation in low income minority children becomes apparent at about age 8, the age when they become capable of understanding that their families differ from others in terms of income, education and life style. This is also the age when the gap in school achievement begins to increase. Economically disadvantaged children perceive that success is unattainable and begin to withdraw from serious engagement, protecting themselves from failure by concluding that school is unimportant. Disengagement in school in many cases is connected to lack of perceived economic returns to school success, whether due to racial/ethnic discrimination in employment or unavailability of lucrative work in the local labor market.

One strategy for addressing the problem of providing high quality training and education for the non-college-bound is some variation of the European apprenticeship. Hamilton (1990) reported that more than half of West Germany's 15 to 18 year old youth are involved in apprenticeships in the public and private sectors. He points out that an apprenticeship system of education for youth simultaneously addresses important psychosocial development needs of youth, provides an engaging education that results in students obtaining in-depth knowledge and skill, and satisfies the society's need to be highly competitive in terms of productivity. Apprenticeships integrate non-college bound youth into the adult workforce. By bringing youth into close contact with persons of other generations, natural interaction will occur as people take part in the network of human contacts with its array of roles, obligations and responsibilities. The German system provides young people clear economic incentives to continue their education, and at the same time helps to build social capital. There are few parallels in American society.

Recently, a version of the apprenticeship was developed by the Commission on the Skills of the American Workforce (National Center on Education and the Economy, 1990). The Commission conducted research in the major industrialized countries to compare the programs of training and education, how the transition from school to work is managed, and the organization of work and its related training prerequisites. One of the Commission's recommendations was to create a national educational performance standard, the "certificate of initial mastery," that certifies attainment of certain uniform standards of

achievement. Certificates of this sort, carrying validation more rigorous than school grades, could be used as a basis for significant incentives from employers.

Research is needed on how current incentive systems affect school staying and leaving of different groups of students and what kinds of new systems might inspire more efforts by the broad group of non-college-bound students, minority and non-minority, to stay in school and achieve the kinds of skills and knowledge needed in the workplace and in further education.

School Membership[9]

If students are to invest themselves in the forms of mastery required by schools, they must perceive the general enterprise of schooling to be legitimate, deserving of their committed effort, and honoring them as respected members. Large numbers of students are so alienated from schools that almost any activities that fall under school sponsorship are suspect. For many students, schooling signifies institutional hypocrisy and aimlessness, rather than consistency and clarity of purpose; arbitrariness and inequity, rather than fairness; ridicule and humiliation, rather than personal support and respect; and worst of all, failure, rather than success. For others, such as middle class youth, the disaffection can seem less personally damaging -- school is seen as a theater of meaningless ritual, unrelated to students' serious concerns. To consider ways of substantially increasing student engagement, researchers have to ask: "What institutional conditions are necessary to get students to buy into the general enterprise of trying to succeed in school?"

Synthesizing a diverse body of work on students' organizational commitment, it appears that schools are most likely to cultivate a sense of membership in students if they demonstrate clarity of purpose, equity, and personal support; provide frequent occasions for all students to experience educational success; and integrate all of these features into a climate of caring. Each of these facets of bonding and membership should be considered hypotheses to be tested as factors that can enhance school retention and achievement.

Clarity of Purpose. It is hard to feel a strong sense of membership in organizations with ambiguous purposes. The "shopping mall high school," by attempting to serve all interests and tastes, and by even refusing to insist that any be pursued with vigor, offers no reason for adolescents to become engaged in academic mastery. On the other hand, the success of "effective schools" has been attributed in part to clarity of school purpose. One explanation of this success is that clarity of purpose builds a sense of membership that enhances engagement in work. Comprehensive high schools with diverse student populations and with multiple demands from the community have a difficult time establishing purposes that are clear enough to enhance students' sense of membership.

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[9]This section is based largely on Newmann, Wehlage, and Lamborn (1992) which contains further references.

Sometimes this is accomplished more effectively through magnet schools or special programs within the school.

Fairness. Blatant discrimination based on race, gender, or religion may seem rare, but in many schools, students of low social-economic status with poor records of achievement or deportment are subject to subtle, yet pervasive, inequity. Many of these youth are "push-outs." Schools convey high status to college-bound students and classes and low status to non-college-bound students and classes. Studies have shown that teachers communicate less interest in and lower expectations for low status students, and that these students receive lower-quality instruction and more disapproval from staff. Similarly, students of minority cultural backgrounds may feel excluded from membership when the curriculum and extracurricular activities fail to take account of their unique experiences. In contrast, when schools strive for fairness through inclusion, equity, and due process, a heightened sense of school membership should advance student engagement in the work.

Support for School Suceess. If the school is to nurture a sense of membership, its most important task is to ensure that students experience success in the development of competence. It is self-destructive to affiliate with an organization that offers experiences of repeated failure, but when the organization is seen as a site of opportunities for meaningful success, this invites membership. Unless one can trust teachers to offer support for the hard work of making and correcting mistakes, the learning process can be too punishing to try.

In addition to support from adults, school membership is also affected by the extent to which peers support school goals. Some research suggests that a peer counter-culture has developed in which African-American students gain identity by rejecting school achievement as "acting white" (Fordham and Ogbu, 1986). To the extent that an oppositional culture affects student perceptions and behaviors, it not only interferes with school outcomes, it probably also bodes ill for the business community that seeks employees with certain work attitudes and personal characteristics assumed to be important for productivity. Whether from adults or peers, personal support for school success contributes directly to students' sense of institutional membership and eventually their engagement in academic work.

Caring. There is more to life than academic achievement. Academic success must not, therefore, be the sole criterion for school membership. Students' moral worth and dignity must be affirmed through other avenues as well, such as nonacademic contact between staff and students -- in athletics, music, outings, and personal advising. In short, to build membership, the separate features we identify (purpose, fairness, support for success) must be integrated within a more general climate of caring. Such climate communicates that all students are worthy, important members of the school and they are cared for as persons who represent multiple aspects of humanity, not simply as objects to trained for productivity in the nation's economy.

- A research agenda should address the multiple dimensions of membership with a broad investigation of how educational institutions can foster this kind of bonding and how this bonding affects student engagement in academic work.

Authentic Work[10]

The final theoretical building block that influences student engagement is the nature of school work itself. If students are to persist with school attendance, completing assignments, and trying to master what is taught, the daily work and activities of schooling must be designed in ways that attract student attention and effort. We use the term "authentic work" to characterize tasks that are considered meaningful, valuable, significant and worthy of one's effort in contrast to those considered useless, contrived, trivial and therefore unworthy of one's effort. We believe that authentic work is likely to increase engagement, graduation, and achievement, but this needs to be tested. We define authentic work according to three main criteria.

Intrinsic Interest. Some topics and activities are considered more stimulating, fascinating and enjoyable than others, and this will depend upon individual differences among students. But beyond the substance of the topic, the way in which a topic is approached can be crucial. Too often knowledge is presented as non-problematic, algorithmic, and superficial, only to be remembered for later use. But if the work can be made problematic in ways that challenge students to use their minds, to engage in substantive conversations with adults and peers, or to go into depth in pursuit of understanding, then, for most students, such work is likely to be more interesting.

School work usually concentrates on abstract verbal and mathematical competence. Student interest will probably be enhanced when tasks permit expression of more diverse forms of talent, especially aesthetic, interpersonal, intrapersonal, kinesthetic, and spatial competencies. Neglecting these areas diminishes the opportunities for students to express intrinsic interests in learning.

Sense of Ownership. Too much of the time in school is devoted to work that is arbitrarily defined and assigned by teachers, leaving students with no sense of ownership. The work is the teacher's work, not the student's work. To experience ownership, students need some influence over the conception, execution and evaluation of their work. Such ownership places students in the role of producing knowledge rather than simply reproducing what others, such as teachers or textbook authors, define as knowledge. Of course, certain facts, definitions, concepts and processes of verification must be acquired and used, and so important limits exist on the extent to which students should control their own learning. But to the extent students can produce, discover and invent new (for them)

[10]This section is based largely on Newmann, Wehlage, and Lamborn (1992) which contains further references.

knowledge, then ownership will be greatly enhanced, and motivation to master should increase.

Connections to the World. Why should students become engaged in work that seems necessary to success only in school, but in no other aspects of life? Authenticity of school work depends in part on its connections to and similarities with work in non-school settings. School work can connect to the world beyond the classroom in several ways.

First, school work should have value beyond the instructional setting. For example, if students produce a newspaper read by peers and adults in and out of school, or if they build something that is used beyond the classroom, the task is more meaningful than one contrived only for instructional purposes. Second, clear, prompt feedback on the quality of one's work is more likely in the world beyond the classroom. In repairing a car, performing gymnastics, or trying to satisfy a client, feedback is prompt, and criteria for success are usually clear. In school students often wait for feedback that is mystified ("Why did I get a C?"). Third, achievements outside of school often depend on the opportunity to ask questions and receive information from others. Non-school settings often require collaboration among individuals to produce work. In school, on the other hand, students are usually required to work alone. Finally, meaningful achievements outside of school often require stages of dialogue and trial and error that require flexible use of time. Too often, school time is rigidly predetermined with periods and bells designed for bureaucratic convenience but which undermine the authenticity of work.

Research on authentic work should explore dropouts' reactions to the kind of work they do in school, and the kind of work they might find more worthwhile. To what extent would more authentic work keep students in school? Are those programs that have shown success with potential dropouts more likely to have curriculum that emphasizes authentic work?

Research should be conducted that assesses the power of each of the four building blocks for different groups of students in different situations. Ultimately, however, it is important to understand how the four influences interact in different settings to either enhance or diminish student engagement.

Theme 3. The institutionalization of effective practice and policy.

Research shows that even when effective practices have been discovered. the broader educational environment poses a number of obstacles to having them adopted or adapted in a coherent manner (Fullan & Stiegelbauer, 1991; Sarason, 1990; Smith & O'Day, 1991). This problem has at least two dimensions. The first is to educate, or otherwise convince, individual practitioners or policymakers that they should adopt, or at least carefully consider, new approaches that may challenge conventional wisdom and dominant trends. The second is to find ways to achieve more consistent coordination among the various agencies and actors that affect the experiences of youth, in school and out, so that the

environment offers consistent support for human investment in high quality educational programs.

The adoption/adaptation issue can be illustrated in several ways. The obstacles include individual resistance, but also structural constraints and deficiencies in technical capacity. Teachers may fail to offer more challenging curriculum to at-risk students even in the face of research that higher expectations seem critical to retention and achievement. A few teachers teaming in a school may achieve success with potential dropouts through community-based curriculum, but other teachers may be of no help because they lack skills in working together or they remain convinced that traditional academic coursework must be offered even when it produces more dropouts. Administrators, teachers and parents may be unable to work together because their workloads and schedules do not allow time to meet. A school district may claim interest in dropout prevention, but lack the technical capacity for identifying its actual and potential dropouts.

The systemic coordination issue arises when states adopt sanctions or incentive programs (Learnfare or revocation of drivers licenses) to keep some students in school, but curriculum and teaching remains boring. Or, an alternative program might adopt interesting new curriculum, but the school is still unable to hold students, because employers in the community offer no powerful incentives for high achievement in school. Students experiencing high residential mobility may not be able to sustain interest in school, because of radical differences in curriculum and teachers' expectations as they move from one school to the next. A school district might find an effective way to identify actual and potential dropouts, but be unable to coordinate social services (counseling, health care, economic assistance) needed to help them succeed in school.

The institutionalization issue is not unique to the dropout problem, but it should be carefully studied in reference to it. As promising strategies for reaching the 90% graduation rate are identified, studies should be conducted that ask, (A) "What kind of evidence, training, and incentives will be needed to maximize adoption/adaptation of these strategies by individual teachers and programs?" and (B) "What forms of systemic coordination and support will be needed from actors and agencies beyond those who work most directly with the students?" Studies of this sort should examine the interaction of policies and practices of states, districts, professional organizations, the business and social services sectors within communities, professional education organizations, initiatives of individual schools and teachers within schools.

III. TYPES OF STUDIES

Pursuit of the three main themes could be achieved through the five following kinds of studies. The studies involve collecting a variety of new data, but should also make use of existing databases. Databases related to poverty research and youth participation in the labor market should be reviewed as potentially informative sources to complement databases aimed more directly at schooling and education.

A. Indepth qualitative studies of particular groups of students selected across a variety of setting who, according to previous research, represent different probabilities of dropping out.

These groups might include dropouts who take and pass the GED; at-risk students who, contrary to predictions, stay and complete school; subgroups within the Latino population with different probabilities for dropping out (e.g., immigrant vs. non-immigrant Mexican-Americans, Puerto Ricans; Cubans; others); highly predictable dropouts who cease participation in formal education; and white students who dropout unpredictably. Significant numbers of dropouts may leave school. but experience various stages of employment, unemployment, and participation in short term educational programs as alternatives to conventional schooling. Knowledge about such patterns should help to clarify the kinds of educational programs most likely to engage these students in serious education. These studies would be illuminate the life histories and mindsets of school leavers and of predicted leavers who stay.

The students, selected for different probabilities of dropping out, may or may not have participated in particular dropout prevention programs. For those who have, it will be instructive to learn about their experiences with various programs without here attempting rigorous evaluation of the programs (this will be discussed under study type C). For students predicted to dropout but who stay in school, the main question is what aspects of their experiences in and out of school keep them engaged in schoolwork.

In studying youth it will be important to examine their expressed rationales for the "choices" they make about schooling (in the directions of both engagement and disengagement), but also to gain a broad and rich understanding of their life circumstances, including experiences in school or other educational programs, in their family, in the workplace, and peer group. Ethnographic understanding of their life circumstances will be necessary to draw inferences about implicit motivation and about the influence of social capital, incentives, school membership, and authentic work in their participation in formal education.

Studies of this sort would help to identify the proportion of dropouts (a) who leave school for "good" reasons and might be worse off attending school; (b) who would require enormous investment of resources to engage them in school; (c) who could be reconnected to school through concrete, manageable interventions, such as supplying daycare or additional language instruction; and (d) whose decisions to drop out reflect unique situations that carry no general remedies for large populations (e.g., idiosyncratic issues in child-rearing, cultural-political "revolutionaries," infrequent forms of mental illness). Since research indicates that factors influencing dropping out often accumulate over an extended

period of time, and the final decision to leave may not involve a clear process of reasoning and choice, it will be necessary to gain a long-term view of dropouts' life histories.[11]

These studies will offer new knowledge not only on the kinds of experiences that different groups of potential dropouts have in common. They will also offer initial evidence about the kinds of programs and interventions that these students consider effective and ineffective.

B. Comparative studies of locations, that is, schools, districts, and states that experience exceptionally low vs. high dropout rates.

Intensive study of locations with the most severe problems should help to clarify the importance of the four factors in theme 2 and issues of institutionalization in theme 3. Just as medical research can advance through the study of pathology, better understanding of the most dramatic instances of educational failure should suggest solutions that may be needed in some situations, but may be inappropriate for the many locations where the problems are less severe and perhaps even more complicated to understand.

It should be instructive to conduct research separately on low retention schools, districts, and states. Within each category, one would look for commonalities that tend to define how low retention schools, districts, and states differ from high retention ones. This could suggest different remedies appropriate to the different levels (school, district or state) and would also clarify issues of institutionalization.

In comparing high versus low retention locations, it will be particularly important to be cautious in attributing causality to the differences discovered. Demographic characteristics known to affect dropout will need to be controlled. It is also possible that contrasts between schools of low vs. middle level retention is quite different from the contrasts between middle vs. high retention schools. As was learned from outlier studies in the effective schools research, many contrasts between the most and least successful schools are not likely to be useful unless we also learn how some locations (school, district, or state) have actually progressed from rates of low retention to rates of high retention.

Studies of low versus high retention locations could be helpful in generating cost estimates of interventions designed for locations with different populations. For example, such studies could include cost benefit analyses of retaining students in a few of the most difficult situations (e.g., Chicago or Detroit) versus reducing relatively low dropout rates in hundreds of more advantaged cities across the country.

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[11] Survey research exists on the reasons that students give for dropping out, but Fork et al. (1992) explain why these reasons do not offer adequate causal explanations.

- In sampling locations based on retention rates (matched on some demographic criteria), these studies may or may not include particular types of interventions or groups of students with different probabilities for dropping out across locations (as in study type A). The point here is to work inductively to see whether low retention versus high retention locations can be distinguished according to types of students and intervention approach.

C. Studies of actual interventions.

As pointed out in the Fork et al. (1992) review, there have been no comprehensive, long term studies that show how policy and program levers external to the student interact with personal characteristics to cause dropout or engagement. Nor have there been comprehensive studies to show how particular interventions actually produce good results with different groups of potential dropouts. In short, there has been virtually no research rigorous enough to show how interventions of schools, districts, community agencies, and states can engage different groups of students long enough to graduate from high school or its equivalent. Evaluations that have been done tend to be plagued by such problems as lack of longitudinal study of cohorts of students, lack of application in more than one setting, lack of adequate comparison groups to rule out selection bias, lack of information on how specific aspects of the program affect students' motivations and behavior. Studies that remedy these problems should be undertaken.

The interventions studied should include a broad range of efforts including

* those sponsored by individual schools;
* district and community-wide programs affecting several schools;
* state programs and legislation;
* programs of foundations or other sponsors (e.g., Lang's "I Have a Dream").

These should include interventions at both the micro and macro levels comparable to those mentioned in the Fork et al. (1992) review.

The number of dropout prevention initiatives across these levels probably reaches into the thousands, and so some criteria should be used in selecting which interventions to study. High priority should be given to those that (a) take the most comprehensive approach in relation to the three themes we have discussed (e.g., the West Virginia drivers license policy would be a narrow approach; the New Futures Project of the Annie E. Casey Foundation would be far more comprehensive); (b) have some documented success; and (c) reach large numbers of potential dropouts. Few interventions are likely to meet all three criteria, but high priority should be given to study those that meet one or more criteria in the order presented. Eventually it would be useful to study new interventions developed under the study type D below.

Studies should be designed to minimize the problems of previous evaluations mentioned above. For example, in addition to studying students currently enrolled or affected by the intervention, the research should include follow-up of former students -- both successful and unsuccessful -- several years after leaving the program. Actual and potential dropouts who were eligible for enrollment at the time, but did not participate should be interviewed, as should those who theoretically should have been affected (e.g., truant students in Wisconsin from families receiving AFDC) but were not. Program staff, funding agents, policymakers and agency monitors should be interviewed to identify the challenges faced, changes made, and the implications for how successful programs need to be structured to survive and improve within the broader education system over a period of time.

D. Creative, conceptual and visionary studies.

In addition to empirical research on school staying and leaving in actual situations, research should contribute to new models and inventive designs that aim explicitly at the four theoretical building blocks of Theme 2, that formulate plans for program and policy which address issues of institutionalization and coordination under Theme 3, and that engage in the kind of cost-benefit analysis suggested in Theme 1. Initially these studies should not be designed to be adopted by any particular constituency, because this is likely to pose constraints that unnecessarily limit imaginative potential. Eventually, however, these studies would include proposals that might be tried by specific schools, districts, states or other agencies. Among these studies would be plans that aim toward one or more actual interventions congruent with other national goals in a few communities.

Creative, conceptual and visionary studies could form the basis for regional and national conferences and forums in the specific communities for which they are designed. Public reactions to the proposals would also be considered data relevant to their potential implementation, and this information would become part of the research base on which to pursue Goal #2.

Proposals in this category that develop to an implementation phase should be studied along the lines described above for type C studies.

E. <u>Synthesis</u> studies that summarize implications for practice, program and policy.

All the studies above must be relevant to practice, program or policy for achieving Goal #2, but we have deliberately refrained from insisting that each piece of research be grounded in specific interventions or policies aimed exclusively toward the goal. The reasons for this are assumptions 3 and 4 in the introduction to this paper. That is, effective practice, program and policy ultimately relies upon a broader theoretical understanding of how students become engaged in learning and how human organizations can best be organized to serve this enterprise. For this reason, research itself must begin, not with policy options, but with the building blocks of theoretical understanding. Some studies

sponsored in response to this framework may address highly specific policy options directly, but we should expect that the knowledge generated by other studies will itself need to be further analyzed to identify implications for practice, program and policy.

For this reason it will be necessary to sponsor studies whose special purpose is to analyze the new research base in order to synthesize implications for practice, program and policy across a number of studies dealing in different ways with the three themes. This activity should occur periodically over a long-term research program, and the results should inform sponsorship of new research.

IV. ORGANIZING TO FULFILL THE RESEARCH AGENDA

A research agenda of this sort carries implications for the organizational structure, funding, and timing of the research enterprise. We cannot address these topics in great detail, but it is important to anticipate some general guidelines.

The agenda proposed here would seem best pursued under a "directorate" as proposed in Atkinson and Jackson (1992). The proposed research agenda requires a long term effort. Some studies would take a minimum of three to five years, and succeeding ones would need to build upon these. The agenda also calls for a variety of approaches and methodologies. But the different approaches must be coordinated to assure accumulation of knowledge on three substantive themes critical to achieving Goal #2. A directorate or institute with authority to sponsor long-term research through field initiated studies, research Centers, and special studies commissioned by or within the directorate would offer a feasible structure. We have not calculated costs for specific studies outlined above, but we sense that funding for such a directorate might approach $20 million per year. Since the research agenda is grounded in a broad framework of student engagement, knowledge generated should be useful for purposes beyond Goal #2 in helping all students to benefit from schooling.

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APPENDIX D

National Dropout Prevention Center

Statement of Research Direction Based on Goal 2

Submitted to
The U.S. Department of Education
Office of Educational Research and Improvement
Washington, DC 20208

October 1992

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Perspectives on the Dropout Issue

What We Know

A National Goal

In 1991, the U.S. Department of Education released *America 2000: An Education Strategy* which outlined six educational goals to be met by the year 2000 (U.S. Department of Education, 1991). Goal One states that all children in America will start school ready to learn. The second goal is that the high school graduation rate will increase to at least 90%. The third goal is for American students to leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, 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 modern economy.

The perspective of the National Dropout Prevention Center is that the accomplishment of Goal Two is inextricably linked with Goals One and Three—that school readiness and the opportunity for all students to learn to use their minds well must be addressed in order to increase the graduation rate and thereby reduce the dropout rate in our schools. The failure of piecemeal, programmatic reform to improve the nation's schools emphasizes the need for a comprehensive, systemic approach to the problem. The National Governor's Association Task Force on Education asserted that "significant steps must be taken to restructure education in all states" and that "simply more of the same will not achieve the results we need" (U.S. Department of Education, 1991).

Failure of Reform Agenda

America 2000 pointed out that in spite of a doubling of the cost of educating elementary and secondary students between 1980 and 1990, the educational system has not increased the quality of student performance, employers cannot hire enough qualified workers, and immense sums are spent on remedial training. The following statistics give life to this statement.

- The National Assessment of Educational Progress found, after testing 100,000 students, that the proportion of 17-year-olds able to perform at the advanced level of reading found in professional and technical work environments was significantly smaller (4.8%) than the proportion (7%) who could perform such exercises in 1971 (Rothman, 1990).

- According to the Louisiana Association of Business and Industry, several years ago when Exxon Refinery announced 13 instrument-technician vacancies, about 4,700 applicants took a test of high-school-level skills. Only 26% of those applicants (1200) passed (Duttweiler & Mutchler, 1990).

- A survey of the senior executives of Fortune 500 companies sponsored by *Fortune* magazine and the Allstate Insurance Company indicated that 36% of the companies surveyed offered remedial courses to their employees to improve reading, writing, and mathematics skills (Bradley, 1989).

Youth Indicators 1991: Trends in the Well-Being of American Youth (OERI, 1991) reports that little improvement has taken place during a decade of school reform. Student proficiency in reading for 9-, 13-, and 17-year-olds did not improve between 1979-80 and 1987-88. While there was some rise in the proportion of 17-year-olds able to perform at the basic and intermediate levels, there was no significant change in the adept or advanced proficiency levels. Nor did American students improve their writing performance. The average performance of black and Hispanic 11th graders was lower than the performance of white 8th graders. And, as has been well publicized, the performance of U.S. students in math and science does not compare favorably with that of students in other countries.

Children of Poverty Are At Risk

In 1987, the Council of Chief State School Officers published *Children At Risk: The Work of The States*. The document states the following:

> ...more children are entering school from poverty households, from single-parent households, from minority backgrounds, and with learning disabilities. These are groups of children with whom schools historically have often not succeeded. (p. 1)

In the coming years, almost half of all America's children will spend at least a portion of their youth being raised by a single parent (Hodgkinson, 1991). The proportion of poor children living in female-headed households rose sharply from 24% in 1960 to 57% in 1989. For black children, the rise was even more dramatic—from 29% in 1960 to 76% in 1989. About 19% of all children and 51% of children in female-headed households lived in poverty in 1989 (OERI, 1991).

The most potent predictor of dropping out of school is poverty. More than one-third of America's children live in at-risk circumstances before they even reach school age. In 1989, the proportion of children living in poverty was higher than it was in 1970, and poverty rates were highest for minority children—43% of all black children and 36% of all Hispanic children lived in poverty in 1989 (OERI, 1991). The impact on education is serious; factors associated with poverty-stricken environments appear to be the critical ones in putting a child at-risk of school failure (Peng & Lee, 1992).

Factors Contributing to At-Risk Circumstances

Children who are at risk from any one condition, are usually at risk from a number of other factors as well ("The demographics of school reform...," 1990). We know that school achievement is affected by all facets of a child's life— safety, nutrition, physical well-being, and mental health (Pollard, 1990). *America 2000* pointed out the following:

- Too many of our children do not have the kind of family which serves as their protector, advocate, and moral anchor.
- For too many children, their neighborhoods are a place of menace, the street a place of violence.
- Too many children arrive at school hungry, dirty, and frightened.
- Too many children start school not ready to meet the challenges of learning.

These are children who live in at-risk circumstances. They lack the home and community resources to benefit from conventional schooling practices (Levin, 1989). Many communities are hard put to find the resources to help such

children. The communities are plagued by violence, drug abuse, teenage pregnancy, racism, and other behaviors and attitudes that are detrimental to human health, equity, and achievement (Duttweiler & Mutchler, 1990). Children living under such conditions are too often neglected by parents, churches, social service agencies, and health services. These agencies do not work together or with the educational system to serve the needs of such children.

Children whose home environments and social backgrounds have resulted in development at odds with the mainstream system are at risk of failing in the traditional educational system. They enter school at a distinct educational disadvantage. Those who do not speak English or who behave according to expectations of the home that are radically different from those of the school, enter the school unprepared to "bridge the social and cultural gap between home and school" (Comer, 1988). Those whose families lack basic material and psychological resources, enter school without the benefit of advocates in the home—that is, family members who can interpret the school curriculum for the child's benefit, who can evaluate the quality of education being offered the child, and who know how to interact effectively with the school system and intercede on behalf of the child (Gandara, 1989).

Early Dropouts

Although we tend to think of students dropping out during their last years of high school, many are lost long before that. Social and task-related behavioral problems that develop into school adjustment problems can be identified at the beginning of the elementary grades (Spivack, Marcus, & Swift, 1986). The dropout problem is not one that can be addressed exclusively at the middle or high school levels. By then it is too late for some students. In 1990, out of approximately 159 million persons surveyed, there were over 16 1/2 million persons 25 years of age and older who had *less than* a 9th grade education (U.S. Department of Commerce, 1991). The *National Education Longitudinal Study of 1988* (OERI, 1991) found that among the cohort which was in the 8th grade in 1988, 6.8% had dropped out of school by the spring of 1989.

Characteristics of Potential Dropouts

Wells (1990) has categorized the characteristics of potential dropouts under the headings of family related, school related, student related, and

community related variables. Table 1 contains examples from Wells' profile characteristics. While the effects of individual indicators vary in potency, when found in combination they tend to predict students at risk of dropping out of school. A specific characteristic may not lead to actually dropping out, but sets of characteristics appear to identify the potential to do so. For example, Frymier and Gansneder (1989) found that almost one-third of a national sample of "typical" students were identified as having six or more risk factors.

It is true that minority students are at greater risk of dropping out because of poverty and lower parental education, but students from minority groups do not make up the largest numerical dropout group. While minority groups have a higher percentage of their students dropping out, the highest percentage of *all* dropouts is white (black, non-Hispanic, 15.6%; Hispanic, 29.3%; white, non-Hispanic, 52.9%) (NCES, 1991).

Furthermore, not all dropouts are low-achievers. Students who are uninterested in or dissatisfied with what goes on in the school are also at risk of dropping out. These students have been identified by the Education Commission of the States as *alienated* students (Wells, 1990). All students may be at risk of becoming, at one time or another, alienated from productive involvement in school. Any student is at risk of becoming marginal—caught in a condition of strained relations with the school or in a struggle with learning (Sinclair & Ghory, 1992). Kronick and Hargis (1990) classify dropouts into four groups:

- *quiet dropouts*—students who go unnoticed until they drop out, usually as a result of chronic failure;
- *pushouts*—who experience chronic failure and react to it in such disruptive ways that they are literally pushed out of the schools;
- *higher-achieving dropouts*—who may be bored with school, or who may drop out because of high mobility or illness; and
- *in-school dropouts*—those who remain in school in spite of continued poor performance and failure.

Implications

Economic Costs. The consequences are well-documented of allowing those children to drop out who come to school with different abilities or with family problems. The job outlook for high school dropouts is bleak. In October

Table 1
Indicators of Potential Dropouts
(Symptoms in combination increase risk.)

Student Related

* Poor school attitude
* Low motivation
* Low ability level
* Low grade-point average
* Attendance/truancy
* Behavior/discipline problems
* Pregnancy
* Drug abuse
* Poor peer relationships
* Nonparticipation
* Friends have dropped out
* Illness/disability
* Low self-esteem/self-efficacy
* Lack of responsibility
* Unrealistic/low aspirations

School Related

* Lack of language instruction
* Conflict between home/school culture
* Overcrowded classrooms
* Lack of adequate counseling
* Negative school climate
* Inadequate discipline system
* Retentions
* Suspensions
* Low standardized test scores
* Placement in tracks
* Inadequate educational options

Family Related

* Low SES
* Dysfunctional home life
* No parent involvement
* Low parental expectations
* Low parental education
* Low parental occupation
* Student has to work
* Non-English-speaking home
* Abuse
* Ineffective parenting
* High mobility
* Minority status

Community Related

* Lack of community support services or response
* Lack of community support for schools
* High incidences of criminal activities
* Lack of school/community linkages

Adapted from: *At-Risk Youth* by Shirley E. Wells
Englewood, Colorado: Teacher Idea Press, 1990

of 1989, a much larger percentage of dropouts (35%) than high school graduates (15%) were not in the labor force—only about one-half of those who had dropped out in the previous 12 months were employed (OERI, 1991).

While employed youth become a *net gain* to a community, unemployed youth become a *net loss*. Catterall (1985) estimated that each year's class of dropouts will eventually cost the country over $200 billion during their lifetimes in lost earnings and unrealized tax revenue. In addition, billions more will be spent for welfare, medical aid programs, and expenses in the criminal justice system. In Texas, for example, high school dropouts account for two-thirds of Texas Aid-to-Families-with-Dependent-Children payments ("Public education...," 1989).

The effects of dropping out often handicap the next generation of children since parental educational level is also a predictor of poverty. Poverty rates among children under age six whose parents had less than a high school education were 62% in 1989. Poverty rates were higher among minority children, even those whose parents had more than a high school education (5% for whites, 10% for Latinos, 22% for African-Americans, and 15% for other minorities) ("Poverty and education," 1992).

Social Costs. A person who drops out of school is much more likely to commit a crime—82% of America's prisoners are high school dropouts. The relationship between being a high school dropout and becoming a prisoner is stronger than the relationship between being a smoker and lung cancer ("The demographics of school reform...," 1990). In general, the states with the highest rates of high school graduation, have the lowest prisoner levels, while the states with the highest dropout rates also have the highest prisoner levels. It takes, on the average, $20,000 per year to maintain each prisoner, and the investment is a poor one—63% of released inmates are returned to jail for serious crimes within three years (Hodgkinson, 1991).

Comprehensive, Systemic Change

Rationale

Many current dropout prevention programs are based on a *deficit model* that assumes the individual child, the child's family, or the chold's culture is deficient in one or more of the qualities needed for school success. Those who define *at risk* as the result of cultural, genetic, or psychological inadequacies in the preschool lives of the child are suggesting that the *at riskness* lies within the student. The implication of this is that the *at-risk* student must be fixed, not the relationship between the student and the school (Waxman, 1992). Working from this assumption, dropout prevention programs have focused on changing the individual, not the circumstances that produce the problem or the conditions within the school system which make the problem worse.

There are many policymakers and educators who see no need to change the way the educational system is structured. And, it is true that the design of the educational system worked relatively well for the agricultural/industrial society it once served. It brought schooling to millions of immigrants, generated the skills and conformity needed to staff the assembly lines, and accommodated a calendar dictated by agricultural seasons. The traditional system—a product of anglo-European culture—flourished in the 1930' and 1940s. Parents pushed their children to excel, most students were attentive to their teachers, students had high standards set for them, homework was expected, and there were no social promotions. There was a surplus of highly qualified teachers because bright women and minorities had few career options other than education, aspiring teachers had to pass rigorous exams to enter teaching, and teaching was a respected profession. Yet, in 1940, only 20% of students graduated from high school (Shanker, 1990). And, for the 80% who didn't graduate, there were jobs on the farms or in the factories, the mills, or the mines.

Unfortunately, the structures designed to serve a factory-based society—large, graded schools; self-contained classrooms; 50-minute periods; lock-step curricula; and standardized tests—have defined the organizational imperatives under which today's schools function in an information society. Schooling is often

reduced to "batch processing" where students are assembled into standard classes and are taught according to predictable steps or stages, within well-defined constraints of time and space (Elmore, 1987). In such a setting, there is no provision for student differences in home culture, readiness, learning style, or developmental needs.

Components of a Systemic Approach

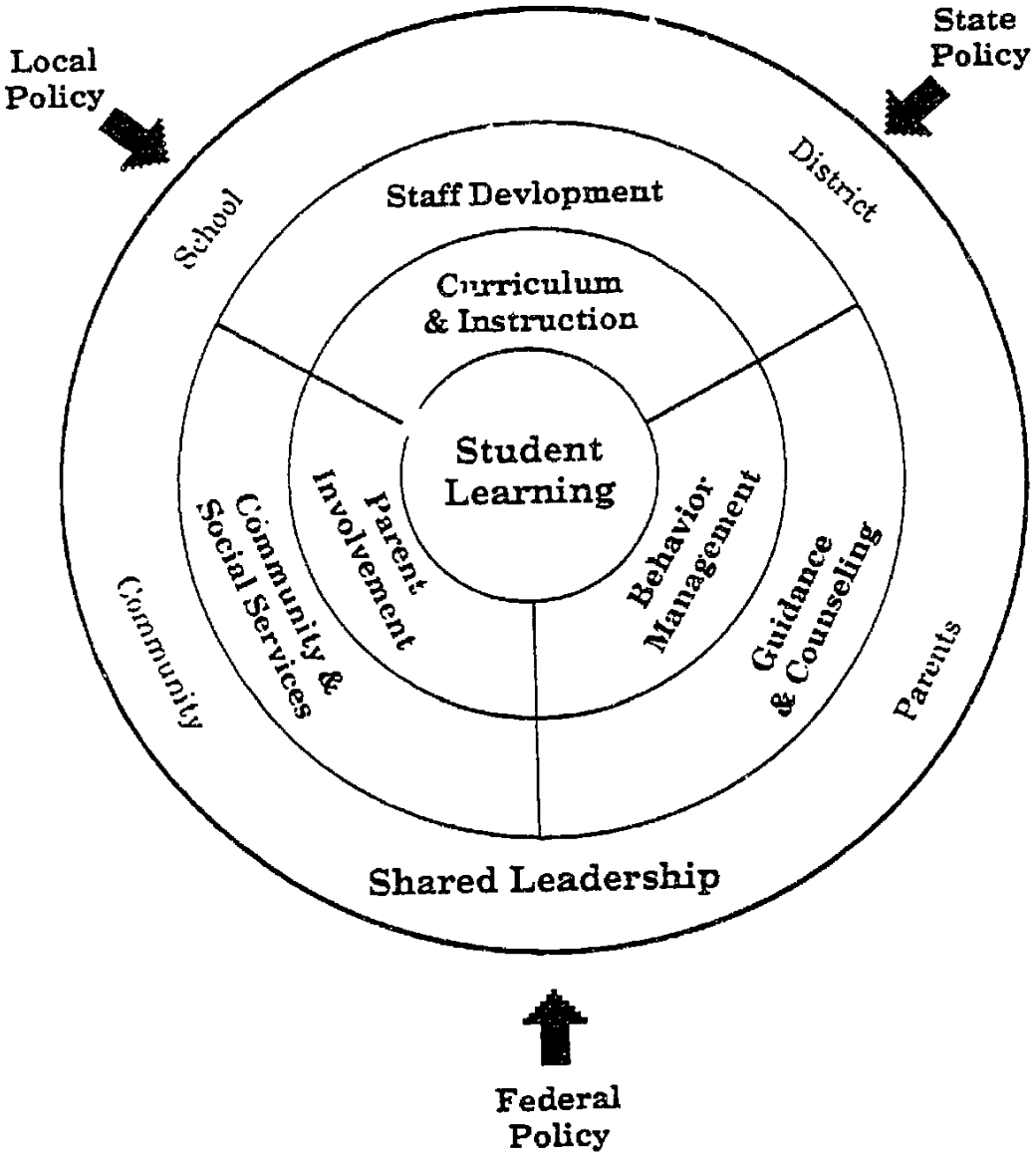
All that we know about effective school leadership, teaching, and learning suggests schools must be *student centered*. Such schools respond to *all the needs of all the students* in the school. Such schools include teachers, parents, students, and the community in decision making. Such schools develop behavior management programs that encourage responsibility and learning in students, provide emotional support and guidance, implement curriculum and instructional programs that encourage active learning, involve parents in student learning, develop linkages with community and social service agencies, and adjust the workings of the school in order to help teachers and students function to their capacity. Such schools are not created through fragmented, programmatic tinkering. Such schools are developed through a *systemic approach* that addresses all the elements that affect student learning.

Figure 1 illustrates the National Dropout Prevention Center's concept of the components of a systemic approach. Student learning is at the center of the model. The components that have the most immediate and powerful impact on student learning are curriculum and instruction, management of student behavior, and parent involvement. Those areas that less directly affect student learning include the guidance and counseling program of the school, community and social service linkages, and staff development.

Although curriculum and instruction, management of student behavior, and parent involvement have a daily impact on the quality of a student's learning, at any one time, the less direct components also might play a critical role. For example, staff development for administrators, teachers, and counselors to implement new curriculum or instructional strategies is essential to improving student learning. Crisis intervention by a guidance counselor may keep a student in school. And, timely assistance by a social service agency may literally save a student's life.

The quality of leadership, particularly within a school, but also within the district and the community, shapes the learning climate. The quality of leadership is a pervasive factor that affects all the rest. In an educational system with quality

Figure 1: Components of a Systemic Approach



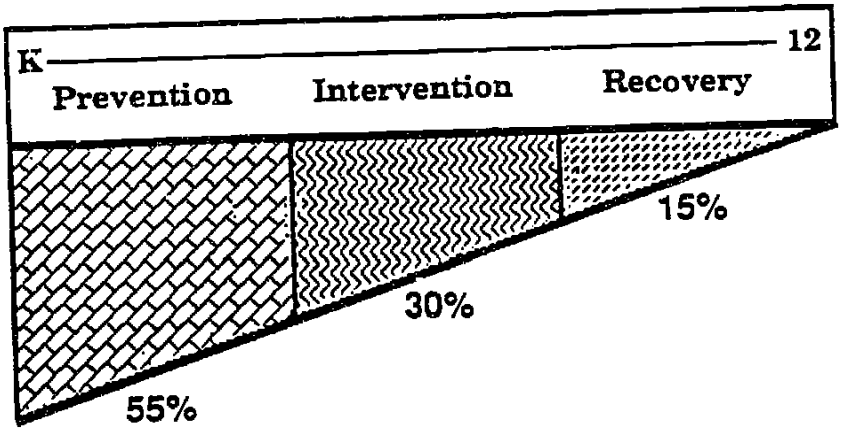
leadership, effective practices are identified through shared decision making and then collegially implemented.

The key to change, however, is the political context within which the educational system functions. Changes in any of the components of the system are dependent on changes in the policies which either facilitate or constrain local decision making, curricular or instructional changes, and the integration of social delivery.

Research Emphasis

Choosing a few priority areas on which to focus is difficult when the problem is so massive and pervasive. The areas which have been chosen reflect the National Dropout Prevention Center's belief that increasing the graduation rate requires major systemic changes which incorporate prevention, intervention, and recovery strategies. Figure 2 illustrates the degree of emphasis the National Dropout Prevention Center believes should be placed on these strategies. *Recovery* includes those attempts to provide alternative experiences for students who have either dropped out or are on the verge of doing so. Recovery strategies have been the major focus of dropout prevention in the past, and, while these strategies do help retrieve many students, it is after a great deal of damage has been done. For this reason, the major emphasis has been placed on prevention and intervention strategies.

Figure 2: Research Emphasis



Intervention identifies and deals with school-adjustment, learning, and home problems before they become entrenched. Intervention efforts might include special reading programs for students with difficulty, group counseling for students who have behavior or esteem problems, or social service assistance in situations of need. Intervention might also include efforts during late elementary and middle school such as transition classes, accelerated classes, alternative schools, or special classroom aides to assist children with special needs.

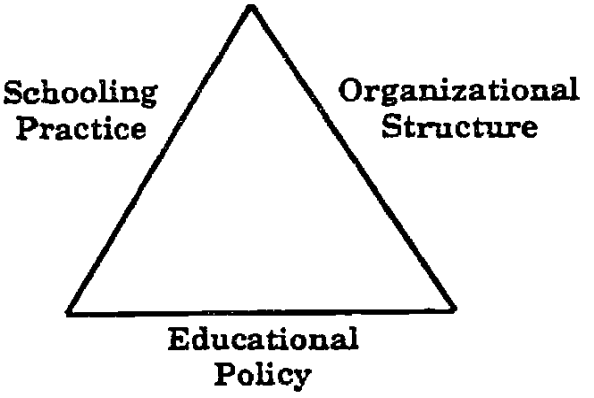
Schools which *focus on fixing* the at-risk child emphasize retention and remediation as intervention strategies for any child that does not fit the mold. As a result, many children who enter school from disadvantaged backgrounds show a *progressive retardation* as they progress through school (Reynolds, 1989). For this reason, a comprehensive, systemic approach to dropout *prevention* must begin with early childhood education.

Prevention encompasses preschool programs, parent education efforts, and social service linkages designed to provide children with the supporting conditions which foster learning. Prevention includes efforts to restructure the decision-making processes in the system. It also includes organizational changes such as nongraded schools and year-long schooling. Practices to improve learning for all students such as schools based on learning styles, accelerated schools, cooperative learning, whole language instruction, integrated curriculum, and behavior management programs which teach social skills and reward positive behavior are also prevention strategies. Perhaps most important of all, changes in organizational structure and educational practice will be either facilitated or constrained by policies. Thus, policy also falls into the area of prevention strategies.

Research Focus

In order to implement effective prevention and intervention strategies, comprehensive, systemic change is needed which includes changes in schooling practices, organizational structure, and educational policies. Figure 3 illustrates the recommended research focus.

Figure 3



The research agenda should focus on (1) *changes in schooling practices*, (2) *changes in the structure of the educational system*, and (3) *policies which encourage flexibility and innovation or which hinder attempts at change*. The following sections present the perspective of the National Dropout Prevention Center and its suggested research agenda. Table 2 on pages 25 through 28 suggest a number of research questions worthy of consideration.

Focus on Educational Practice

Research Focus

Investigate schooling practices which ensure that all children function successfully in the educational system.

Importance of Early Identification

One of the most significant findings to emerge from research on dropouts is that early identification is vital to effective prevention. The earlier a problem is identified and addressed, the greater will be the impact on at-risk students. The most effective way to reduce the number of children who will ultimately dropout is to provide the best possible classroom instruction from the beginning of their school experience. "Learning deficits easiest to remediate are those that never occur in the first place" (Slavin & Madden, 1989, p. 6). A longitudinal study of children at risk (Hagemann, 1992) suggests that instruction in first grade is critical. The seeds of learning are planted early in a child's life and that is the optimum time to nurture them.

Effectiveness of Prekindergarten Programs

Research has found that early schooling experiences which are effective include a preventive health and nutrition component and involve parents as their children's first teachers. Children who had prekindergarten experience through programs such as Head Start had parents who were more involved in the children's school activities. Because of this influence on parental involvement, prekindergarten experience has been found to have an indirect, positive effect on first grade academic achievement and on children's social adjustment (Taylor, 1991). Such programs appear also to be cost effective—every $1 invested in such

programs saves the taxpayers $6. Research also indicates that two out of three children with such experience complete high school. In studies with matched control groups, more students who had early schooling experiences were employed at age 19, fewer were on welfare, and fewer were involved with the criminal justice system (The Conference Board, 1992).

Curriculum and Instruction

Curricular and instructional practices are the core of the schooling process. Perhaps the most important question in education is: What do we want students to learn, not only in schools today, but also, to remember and be able to do many years in the future (Cole, 1990), and what is the best way to accomplish this goal?

Practices which include active learning, learning in context, and content which has meaning for students are more likely to produce positive academic performance. Some of the curricular and instructional changes being tried in schools across the country include whole language, interdisciplinary curriculum, cooperative learning, alternative assessment strategies, teaming, lead teachers, heterogeneous grouping, and using technology to accelerate the learning of at-risk students.

Whole language strategies generally present a *holistic* approach that builds on students' strengths as opposed to a skill-driven basal reading program. *Interdisciplinary curriculum* reduces the fragmentation in learning by integrating the subject area content across themes or issues in order to help students build links between the learnings in various disciplines. *Cooperative learning* strategies structure lessons so that students work together to accomplish shared goals. The achievement of the group depends on every student's participation and successful learning. Alternative or *authentic assessment* involves tests, portfolios, demonstrations, or performances that engage students in the actual behaviors, standards, and habits needed for success in the academic disciplines or in the workplace.

Such strategies raise a number of research questions. How can schools better help students make connections between their own lives and the curriculum? How can teachers involve students in active learning? What kind of balance works best between basic and holistic learning or individual and group learning?

Teaming occurs in a number of different ways: as leadership teams, as teacher grade-level teams, as teacher interdisciplinary teams, as departmental teams, as student teams, and/or as teachers and students grouped together in teams. *Lead teachers* play a leadership role in curriculum areas or grade levels, mentor beginning teachers, and/or coach colleagues within the school. Lead teachers may or may not receive additional stipends, have reduced teaching loads, or additional time.

Heterogeneous grouping puts students of various ability levels together in the same classroom. In some schools, this means grouping together only those students who do not qualify for accelerated, gifted, or advanced placement courses. In some schools, students are heterogeneously grouped only in certain subject areas or only for cooperative learning activities. There is some debate over these strategies. Research is needed to determine how effective such strategies are and how they affect different categories of students.

Modern instructional and management *technology* offers a variety of opportunities for schools and communities to address the needs of students from at-risk circumstances. A vast array of new technologies, however, still have not been whole-heartedly adopted as an integral part of the curricular and instructional programs in the schools. For example, first the typewriter, which has existed for well over a century, and now the word processor have transformed written communication in our society. Yet, classroom instruction still focuses on cursive writing rather than computer typing skills (Sylwester, 1990).

Used properly, technology can engage students in interesting activities through which teachers can present skills, concepts, or problems to be solved. For example, computers provide immediate feedback with the attendant motivational advantages. In addition, interactive video disc/ computer technology mixes visual, tactile, and listening modes of learning, and offer a nonjudgmental, private environment in which students can test their own thinking at their own speed. When used as a teaching tool, computers can be invaluable in individualizing and accelerating student learning. Determining appropriate software to use with at-risk students and identifying the most effective mix of instructional strategies should be part of the research agenda. Other technologies and their effects on student learning also need to be investigated.

Behavior Management

Metz (1978) observed that the tension between keeping order in classrooms and providing education for a diverse student population has presented teachers with a dilemma:

> They exist to educate children, but they must also keep order. Unless the children themselves are independently dedicated to both these goals, the school will find that arrangements helpful for one may subvert the other. (p. 243)

The dilemma is, in part, a consequence of trying to impose uniformity in spite of the variable conditions of learning and the diversity of students (Corwin & Borman, 1987). Many of the educational problems experienced by students from at-risk circumstances stem from a major function of the school, that of controlling behavior. Teacher-centered classroom tactics—lecturing, large-group instruction, reliance on a textbook and chalkboard, seatwork assignments, recitation, and teacher-directed discussion—are designed to control behavior (Cuban, 1986).

Each child enters school with a set of social behaviors, culturally derived expectations, and a system of communication skills. With some children, these behavioral characteristics provide a "good fit" with the demands of the classroom. With others, their behavioral characteristics are at odds with classroom social norms and may lead to patterns of school failure (Taylor, 1991).

Saracho and Gerstl (1991) suggest that ethnic groups, independent of socioeconomic status, display characteristic patterns of thinking styles that are different from one another. Members of a specific culture are socialized within a matrix of cultural history, adaptive approaches to reality, and behavior patterns. Researchers need to investigate how different patterns of socialization affect the way that groups of people communicate, behave, and learn, and how this, in turn, affects students' adjustments to the school's expectations for appropriate social and academic behavior.

Parent Involvement

Research consistently finds that parent involvement has a direct, positive effect on children's achievement. Parents are children's first and most essential

teachers. To be ready for school, children must live in a secure environment where language and behavior standards promote learning. Many children, however, come from situations where parents do not read to them and sometimes do not even talk to them. Early education programs such as Head Start may have positive effects on a child's initial schooling experience because the programs also improve the functioning of the family (Taylor, 1991). There are a number of efforts underway across the country which provide parent training (Boyer, 1991). The effects of these programs need to be more thoroughly investigated. In addition, research needs to identify the significant variables related to parent involvement and to identify ways the schools can increase such involvement

Staff Development

Research on educational change has illustrated the need for schools to be connected to outside knowledge in order to improve (Tye & Tye, 1984). Professional development serves to connect the schools with craft knowledge and to develop the skills and attitudes necessary to successfully implement changes in the school. Although school change is predicated on the assumption that teachers and others involved will be trained in new strategies, models, or practices, resources for training and workshops are usually limited (LeCompte & Dworkin, 1991). In his study of schooling, Goodlad (1984) found little evidence of active, ongoing exchanges of ideas and practices across schools. Eighteen years after the publication of the study, this is still the rule rather than the exception.

This isolation of both teachers within a school and schools from each other is perhaps the greatest impediment to change. Becoming aware of new models and strategies and learning the skills to implement them, is essential. When learning and change occur through trial-and-error or through the ability of school staff alone to detect problems and envision solutions, school staff have no opportunity to benefit from the advice, experience, or expertise of their colleagues; have few models of teaching excellence to emulate; and have no standards against which to judge their own teaching or administrative behaviors (Rosenholtz, 1985).

Many teachers and principals are not prepared to teach and guide at-risk students. While most educators can recite the primary conditions associated with at riskness, they fail to understand how the mismatch between school expectations and community culture can put some students at risk. Furthermore, they know little about which instructional strategies work better with

such students, do not have the management skills to deal effectively with such students, nor do they realize how teacher prejudice and low expectations contribute to students' failure to achieve (Duckenfield, Hamby, & Smink, 1990). Effective staff development materials and strategies to meet these needs should be developed and tested.

Guidance and Counseling

Most school systems have guidance and counseling programs, but, unfortunately, many do not provide effective or sufficient services to all the students. Many school systems have student-to-counselor ratios that are too high for any but the most superficial services. Often counselors do not have the resources such as computers, appropriate tests, or the time to be able to effectively counsel students.

Excessive record keeping responsibilities often hinder guidance counselors from carrying out their responsibilities to the student population. Administrators often expect the counselor to maintain academic records, prepare workshops for students, conduct group counseling sessions, and counsel students one-on-one. In many places, the guidance counselor also runs into caveats when trying to work with teachers. Teachers may perceive the guidance counselor as a *paper pusher* who pulls students out of class periodically.

Research which identifies the most effective use of guidance and counseling personnel will help them to function in a more consistent manner. More studies on staffing and allotment of time for guidance counselors, studies on how administrative, teaching, and counseling staff can best collaborate are needed also. Until a more direct and consistent plan for counseling services is defined and enacted, guidance counselors will continue to function more as administrators than as counselors.

Community and Social Service Linkages

Schools alone cannot handle the problems of students who come from at-risk circumstances. Such problems must become the collective interest of the family, the school, and the community. Building partnerships among these important elements is essential (Southern Rural Development Center, 1989). For this reason, researchers should study the ways in which community and social service linkages foster *resiliency* in children. *Resiliency* refers to the de-

gree to which individuals can cope successfully in situations of stress, risk, or adversity (Benard, 1992). The development of resiliency among African-American youth has been categorized by Rutter (1987) as involving: (1) the reduction of negative outcomes by altering either the risk or the child's exposure to the risk, (2) the reduction of a negative chain reaction following risk exposure, (3) the establishment and maintenance of self-esteem and self-efficacy, and (4) the opening up of opportunities.

Benard (1992) points out that in studying the protective factors that foster resiliency, the researcher is, by definition, studying children who experience major stress, risk, or adversity in one or more of the environmental systems composed of the family, the school, and the community. When major risks lie in one system, protective factors must be built into one or both of the other systems. The quality of the protective factors provided by a system is determined by the degree of *caring and support*, *high expectations*, and *children's involvement and participation* in the system.

It appears that the timely provision of social services is one of the *protective factors* that fosters resiliency in students from at-risk circumstances. Schorr (1989) recommends that such programs meet the needs of a child through comprehensive service delivery; serve a family unit, rather than a group of individuals; and give program staff time, training, and skills to build sustained, trusting relationships with children, families, and the community.

Following the 1989 Kentucky Supreme Court ruling that declared the Kentucky school system unconstitutional, the Kentucky Legislature passed the Education Reform Act. One of the major strategies of the act is to "remove impediments to learning." To that end, 206 Family Resource and Youth Service Centers have been funded to date to enable schools to link students and their families to social and health service agencies and other community resources ("Building a sense of community," 1992).

There is a need to study the implementation of comprehensive social service delivery systems which coordinate services among education and health, social and community agencies. In addition, researchers should investigate the the extent to which such services contribute to *resiliency*.

Research Focus

Investigate the effectiveness of various organizational structures for creating optimum learning environments which compensate for the dysfunctional conditions that place students at risk.

Restructuring

A systemic approach calls for a flexible organizational structure that enables teachers, school administrators, students, parents, and the community to collaborate in providing the students in each learning environment with the experiences they need to achieve success. Many policymakers and practitioners believe that *restructuring* is the key to creating this flexibility. *Restructuring* the educational system is a process that redesigns the roles, relationships, regulations, and distribution of authority so that desired changes can be made in what schools do and the kind of outcomes they produce. *Restructuring* efforts are distinguished by a focus on the individual school as the unit of decision making; the development of a collegial, participatory environment among school staff, students, parents, and the community; and the redesign of structural elements to accommodate innovations in curriculum, instruction, and use of time. *Restructuring schools* seek to identify creative, new, effective ways of organizing and delivering educational services (Jenks, 1988).

Shared Leadership. There is a trend toward expanding the leadership of schools to include those who have a vested interest in seeing students achieve: teachers, parents, community members, and the students themselves. The belief is that shared leadership empowers people and develops in them a sense of commitment to and concern for the organization. Shared leadership patterns—talking to, listening to, and involving people—not only tap the resources of people to solve specific problems, but engage their willing cooperation and commitment (ASCD, 1985).

Through participatory decision making, the learning community defines its vision for the school, explores the needs of the students and the school, researches possible approaches to restructuring the instructional and curricular core of the school, and proposes possible strategies for implementation. Including teachers,

parents, community members, and students in the leadership of schools and districts may ensure a greater awareness of and sensitivity to the social and cultural differences that students bring with them to the school. More information is needed on why some change efforts succeed where others fail and what types of organizational configurations are most effective.

Changes in the Structuring of Time. The whole purpose of restructuring decision-making processes within a system is to ensure that each community and each school has the flexibility to design the type of learning experiences necessary for its population of students to succeed academically. Learning communities should have the flexibility to deal with the organization of time. *Year-long schools* have eliminated the long summer break and replaced it with various alternative schedules which allow two- to three-week breaks between instructional sessions. This type of structure appears to be more effective with students from at-risk circumstances. It is one way to avoid the learning loss that occurs over a three-month summer vacation.

Similarly, failure and retention appear to be reduced in nongraded primary schools. *Nongraded levels* and continuous progress schools are based on the philosophy that children develop at differing rates. Such schools offer flexible groupings that encompass a two- to four-year range in age, allowing movement between levels as pupils are ready to advance. Another way to change the use of time is *flexible scheduling*. Flexible scheduling strategies include parallel, block scheduling that reduces student-teacher ratios during selected periods of time; extended day programs; scheduling to provide teams with planning or staff development time; or other strategies that vary from the traditional use of time. The effects of changes in the structuring of time on restructuring efforts, staff development, and student learning are important research topics.

Research Focus

Investigate the effects of local, state, and federal policy on organizational structure, schooling practices, and provision of social services.

Effects of Policy Decisions

Not only is it necessary to identify schooling practices which affect at-risk students, but it is of equal or greater importance to investigate the influence of local, state, and federal policies on schooling practices. Any changes in the structure of the educational system will be the result of *political* decisions. Efforts to change the system, especially in the area of decision making, may lead to conflict unless those in power at state and local levels relinquish to the schools the authority to make decisions in significant areas.

Research evidence suggests that governmental programs and policies do not always help schools deal with the dropout problem but sometimes contribute to the problem (Tye, 1992). In addition, policy decisions in a number of areas have actually hampered local efforts at improving the schooling experience for students from at-risk circumstances. The following sections offer some examples.

Measures of Achievement. A desire to improve public education and hold schools accountable has resulted in policies increasingly focused on the use of standardized tests as measures of student achievement. Although policymakers assume that tests stimulate students' learning and lead to better performance, available evidence suggests that, while tests make tracking and sorting more efficient, they do not support or enhance instruction (Wiggins, 1991).

Shepard (1991) contends that an outdated, 30-year-old theory of learning shapes our view of student achievement and how we assess it. Critics of standardized tests claim that they have skewed the curriculum toward the teaching of what is most easily measured by machines, focusing on the acquisition of basic skills and fact—on the short-term goals of schooling—as ends in themselves rather than as a means to further learning and growth (Cole, 1990). When rewards and sanctions depend on the scores that schools obtain, schools

expend considerable efforts to look good on these indicators, and other educational goals become secondary (Oakes, 1989).

Promotion/Retention. Many school districts have implemented formal promotion/retention policies in an effort to standardize school practice. Retention is assumed by policymakers to give children who are not ready for promotion an extra year to develop adequate academic skills, and, therefore, is considered to be beneficial to them. However, there is evidence that retention in grade does not improve children's academic achievement or school adjustment relative to children who were not retained (Reynolds, 1992). In fact, many studies show negative effects on both cognitive achievement and affective outcomes whether the retention is in elementary school or high school. According to Holmes' (1989) meta-analysis, achievement could actually be depressed by prior retention. Moreover, the negative effects of retention on achievement appear to increase over time. Retention in grade is regarded by researchers to be one of the most powerful predictors of whether a student will drop out of school (Hess & Greer, 1987).

On the other hand, social promotion policies—moving a student into a higher grade regardless of academic preparation—is doing the student a disservice. Either way the school is saying to the student, "If you don't fit the standard mold we have for students, you lose." In order to provide policymakers with alternatives to this either or situation, researchers need to investigate the effectiveness of alternatives such as early childhood programs, parenting programs, early intervention strategies, transitional grades, and classes to accelerate student learning.

Attendance. In order to limit the number of unexcused absences, many school districts have implemented policies which require a student to repeat a course if he/she missed more than a certain number of classes. Multiple absences are indeed a serious obstacle for a student's academic achievement. But pure disciplinary methods are not a panacea for this problem. For instance, research suggests that the 10-day limit on unexcused absences may cause an increase in the dropout rate. Chamness (1987) reported that in one school district 48% of the identified dropouts in 1985 said that they left school because they were absent more than ten days. Researchers might investigate other ways to deal with absences without pushing students out of school.

Remedial/Compensatory Education. The legislation which mandated federal Chapter 1 programs intended to provide remedial and compensatory education for children who are economically disadvantaged. The guidelines specify which students are to be served but not how they are to be served. Unfortunately, this often leads to a fragmented educational experience for children who need a holistic one. Compensatory and remedial programs are often so poorly coordinated with the regular school programs that student learning is impeded. Chapter 1 teachers often have low expectations for students and slow down learning. As a result, rather than achieving better skills in order to exit from the programs, Chapter 1 students often become "lifers" (Anderson & Pellicer, 1990). Alternative ways of assisting economically disadvantaged students need to be investigated, and policies need to be changed to allow alternatives to be implemented.

Research Questions

Table 2 on pages 25 through 28 contains the research agenda suggested by the National Dropout Prevention Center. The priority areas of educational practice, organizational structure, and policy are listed. The research focus for each area is given, and suggested research questions follow. While these suggestions by no means exhaust the possible questions that could be asked, they provide examples of those topics the National Dropout Prevention Center believes are important. It is necessary to understand the factors within the system itself that put students at risk and to identify strategies that will shape the school environment to provide optimum conditions to support the learning of at-risk students.

Table 2: National Dropout Prevention Center Suggested Research Questions

Priority Area	Research Focus	Research Questions
Educational Practice	Investigate schooling practices which ensure that all children function successfully in the educational system.	*Early Childhood Schooling* ✦ How can school expectations be adjusted to accommodate students' cultural differences while, at the same time, teaching students with diverse backgrounds the skills needed to succeed in school? ✦ What are the essential components of a holistic early schooling experience designed to accommodate students' differential development and learning styles? ✦ How can prekindergarten programs be expanded to serve all of the students in at-risk circumstances? ✦ How do early childhood programs in the United States compare with those in other countries? *Curriculum and Instruction* ✦ How can schools best respond to learning variations among students that result from their previous cultural experiences? ✦ How can schools better help students make connections between their own experiences and the curriculum? ✦ How can teachers involve students in active learning? ✦ What kind of balance works best between basic and holistic learning or individual and group learning? ✦ How effective are grouping strategies and how do they affect different categories of students? ✦ What is the most effective mix of instructional strategies for different curriculum areas? ✦ What effect do various instructional strategies have on the learning of students of differing ability levels, socioeconomic status, and cultural backgrounds?

Priority Area	Research Focus	Research Questions
		✦ What are effective ways of using technologically-delivered instruction to accelerate the learning of students in at-risk circumstances? ✦ What teacher/counselor characteristics and attitudes are more likely to be successful with at-risk youth? *Behavior Management* ✦ How do school environments trigger or increase the difficulties students experience? ✦ What is the relationship between sociocultural background, social behavior skills, school behavior expectations, and academic performance? ✦ What behavior management strategies work best with different groups of students? *Parent Involvement* ✦ What are the social or cultural barriers that constrain parent/caregiver involvement in the schools, and how can these be overcome? ✦ What are the effective efforts to educate parents or other caregivers and increase their involvement in their children's learning? ✦ How do parent/caregiver training programs affect students' school adjustment and learning? ✦ What are the significant variables related to parent/caregiver involvement? *Guidance and Counseling* ✦ What is the most effective use of guidance and counseling personnel? ✦ What strategies are effective for schools which have no counseling personnel? *Staff Development* ✦ What methods/time frames best facilitate the long-term delivery of training and assistance to teachers, parents, community members, and school administrators in how to implement new structures and strategies?

Priority Area	Research Focus	Research Questions
		♦ What should be included in training for teachers, parents, community members, and school administrators in how to work effectively with at-risk students and families? *Community and Social Services* ♦ How can students be helped to identify with and become a part of the community? ♦ How can the delivery of social and educational services to families in at-risk circumstances be effectively integrated? ♦ What are the "protective" factors that foster resiliency in children from at-risk circumstances?
Organizational Structure	Investigate the effectiveness of various organizational structures for creating optimum learning environments which compensate for the dysfunctional conditions that place students at risk.	*Restructuring/Shared Leadership* ♦ What types of organizational configurations are most effective? ♦ Why do some change efforts succeed where others fail? ♦ What are the configurations of organizational structure that effectively involve teachers, parents, and the community in the decision-making process? ♦ How can SEAs effectively shift their relationships with LEAs, and how can LEA's shift their relationships with schools from that of directing and regulatory to support and service? *Structuring Time* ♦ What can be done to provide time for collegial planning, staff development, and shared decision making in the schools? ♦ What are the effects on students from at-risk circumstances of variations in scheduling the traditional school day and year? ♦ What are viable alternatives to either retention or social promotion (such as nongraded primary schools, transitional or accelerated classes, and alternative schools)?

Priority Area	Research Focus	Research Questions
Educational Policy	Investigate the effects of local, state, and federal policies on organizational structure, schooling practices, and the integration of social services.	♦ What are the local, state, and federal legislation, policies, and regulations that foster or restrain the implementation of effective curricular and instructional strategies for students from at-risk circumstances? ♦ What are the local, state, and federal legislation, policies, and regulations that foster or restrain flexibility in the use of resources, time, and personnel in order to better meet the needs of all the students in n school? ♦ What are the local, state, and federal legislation, policies, and regulations that encourage or hinder innovative organizational structures? ♦ What kinds of governmental policies facilitate the linkages between schools and social service agencies? ♦ What are alternatives to standardized testing that will ensure accountability within the system?

Level of Effort

The National Dropout Prevention Center recommends a level of effort that provides for (1) confirmation or replications of past research agenda topics, (2) new research which provides insight into what works best for students from at-risk circumstances, and (3) high-risk topics which might produce provocative results. In addition, resources should be available not only for research but also for demonstration/dissemination efforts. Figure 4 illustrates this.

Figure 4: Level of Effort

Effort → / ↓		60%	40%
		Research	Demon./ Dissem.
20%	Cont. Topics		
60%	New Topics		
20%	High Risk		

Implementation of Research and Time Frames

The National Dropout Prevention Center recommends that investigations into systemic changes involving organizational structure, schooling practices, and educational policy become a part of the scope of work of the national research centers and the regional educational laboratories on a five-year schedule as has been the practice in the past. In addition, investigations on changes in organizational structure with a five-year completion schedule should be announced in requests for proposals to local education agencies and to partnerships which include local education agencies. Requests for proposals on issues involving schooling practices might be designed for a shorter completion span (one to three years), and research on policy issues might have a one-to-two-year span. Resources should also be set aside for those unsolicited and unexpected proposals that show promise of forging new directions. Table 3 provides a graphic illustration of these recommendations.

Table 3: Research Structure

Areas of Research	Implementation	Time Frame
Organizational Structure	Center & Lab Investigations Field-initiated studies (RFP's to districts, partnerships)	5 year
Schooling Practices	Center & Lab Investigations Solicited studies Open RFP's	1-3 year
Educational Polic	Center & Lab Investigations RFP's to SEA's, LEA's Solicited Studies Open RFP	1-2 year

Summary and Conclusion

The National Dropout Prevention Center's perspective is that the accomplishment of Goal Two is linked with Goals One and Three—that school readiness and the opportunity for all students to learn to use their minds well must be addressed in order to increase the graduation rate. The failure of piecemeal, programmatic reform to improve the nation's schools emphasizes the need for a comprehensive, systemic approach to the problem.

The dropout problem is not one that can be addressed exclusively at the middle or high school levels. Social and task-related behavioral problems that develop into school adjustment problems can be identified at the beginning of the elementary grades. Therefore, the most effective way to reduce the number of children who will ultimately need remedial services is to provide the best possible classroom instruction from the beginning of their school experience.

The areas which have been chosen as part of the research agenda reflect the National Dropout Prevention Center's belief that increasing the graduation rate requires major systemic changes which incorporate prevention, intervention, and recovery strategies, with a major emphasis on prevention and intervention. In order to implement effective prevention and intervention strategies, comprehensive, systemic change is needed. The research agenda should focus on (1) *changes in schooling practices*, (2) *changes in the structure of the educational system*, and (3) *policies which encourage flexibility and innovation or which hinder attempts at change*.

Suggested Research Focus

- ***Investigate schooling practices which ensure that all children function successfully in the educational system.***
- ***Investigate the effectiveness of various organizational structures for creating optimum learning environments which compensate for the dysfunctional conditions that place students at risk.***
- ***Investigate the effects of local, state, and federal policy on organizational structure, schooling practices, and provision of social services.***

OERI's Role

It is imperative that the Office of Educational Research and Improvement (OERI) take the leadership in ensuring that research on strategies necessary to accomplish the six national educational goals is not fragmented. Where the goals are linked, the research also should be linked. Where piecemeal investigations will result in the same inconclusive results, there should be comprehensive, systemic investigations to define the essential elements in effective, lasting change efforts that improve student learning.

OERI, while responsible for clearly defining the scope of research, also should be responsive to *hot topics* and *innovative issues*. There should be enough flexibility in the research guidelines to allow for new and creative studies. Above all, any research agenda should be sensitive to the *realities* of local communities and local education agencies. Unrealistic timelines, starting dates which preclude effective planning or hiring of personnel, and expectations for immediate results are not in keeping with the realities of change.

Finally, although OERI and the U.S. Department of Education may be held more accountable to policy makers than are other educational agencies and organizations, they must also keep faith with practitioners. The research agenda must reflect the true concerns of those in the field and must hold out hope for resolving long-standing problems. It is a moral imperative: those who are in the business of improving the educational system must face the hard truths and seek the difficult solutions.

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