

## Why Students Drop Out of School and What Can be Done

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## Abstract

This paper examines why students drop out of school and what can be done about it. After briefly summarizing who drops out of school, the paper reviews the theoretical and empirical research that attempts to explain why students drop out of school based on two different conceptual frameworks that are both useful and necessary to understand this complex phenomenon. One framework is based on an individual perspective that focuses on individual factors associated with dropping out; the other is based on an institutional perspective that focuses on the contextual factors found in students' families, schools, communities and peers. The paper also discusses the extent to which these frameworks can be used explain differences in dropout rates among social groups, particularly racial and ethnic minorities. The next section of the paper examines various strategies to address the dropout, reviewing examples of both programmatic and systemic solutions, and the extent to which policy can promote them. The final section of the paper discusses whether the United States has the capacity and the will to reduce dropout rates and eliminate disparities in dropout rates among racial and ethnic groups.

Despite a long-term upward trend in school completion in the United States, each year about 5 percent of all high school students drop out of school (Kaufman, Kwon, Klein, and Chapman, 1999, Table 1). In the 1997-98 school year 479,000 students dropped out of high school (U.S. Bureau of the Census, 1999, Table 7).<sup>1</sup> .

Yet a substantially higher proportion of students quit school sometime over their educational careers. One longitudinal study of young men who were 14 to 21 years of age in 1979, estimated that 37 percent had quit high school for at least a 3 month period, even though in 1990, when the young men were 25 to 32 years old, only 14 percent were classified as high school dropouts (Klerman & Karoly, 1994). Another longitudinal study of students who were 8<sup>th</sup> graders in 1988 found that 21 percent had dropped out school at some point since 8<sup>th</sup> grade, even though only 12 percent—roughly half of that number—had not completed high school by 1994 (Rumberger & Lamb, 1998).

Not only are a sizeable proportion of students dropping out, an increasing number of students are completing high school by getting a GED or through other alternative means rather than earning a traditional high school diploma. Although the proportion of youth completing high school has remained steady over the last decade, the proportion earning high school diplomas has actually declined. In 1988, 80 percent of 18 to 24-year olds earned a high school diploma; in 1998, 75 percent earned a high school diploma (Figure 1). In other words, 10 percent of all young people completed high school through an alternative means in 1998 compared to 4 percent in 1988. The reason the method of high school completion may be important is because some recent studies have questioned whether the economic payoff to a high school equivalency is comparable to a traditional high school diploma (Cameron & Heckman,

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<sup>1</sup> This figure includes persons 15 to 24 years old who were enrolled in grades 9-12 the previous year, were not enrolled in school in October 1998 and had not graduated. It excludes another 36,000 students who dropped out from grades 7 and 8.

1993; Murnane, Willet, & Boudett, 1995, 1997; Murnane, Willet, & Tyler, 2000; Rumberger & Lamb, 1998; Tyler, Murnane, & Willet, 2000). This trend may accelerate due to recent policies to increase high school exit requirements.

Dropout rates in the U.S. vary widely among major racial and ethnic groups. In 1998, the dropout rates among persons 16 to 24 years old were 7.7 percent for White, non-Hispanics, 13.8 for Black, non-Hispanics, and 29.5 for Hispanics (U.S. Department of Education, National Center for Education Statistics, 2000, Table 108). The high dropout rate among Hispanics has been a particular concern for the federal government, which recently issued a report on this problem (Secada et al., 1998).<sup>2</sup>

Reducing the number of dropouts has become a national policy concern. In 1990 the nation's governors and the President of the United States adopted 6 national education goals for the year 2000 (U.S. Department of Education, 1990). Goal 2 was to increase the high school graduation rate to 90 percent, with a related objective to eliminate the existing gap in high school graduation rates between minority and non-minority students. To help achieve these goals, in 1994 Congress enacted the Goals 2000: Educate America Act, which has awarded over \$1.5 billion to participating States and districts to support communities in the development and implementation of education reforms (U.S. Department of Education, 1998, Appendix A). In addition, numerous programs at the national, state, and local levels have been established to help reduce the number of students who drop out of school.

Why is there such concern for dropouts? One reason is that dropouts cost the nation money. Dropouts are less likely to find and hold jobs that pay enough money to keep them off

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<sup>2</sup> Although dropout rates for Hispanics are indeed high, more than 40 percent of all young Hispanics are foreign-born and more than 40 percent of foreign-born Hispanics never attended school in the U.S. (McMillen et al., 1997, Table 16). In 1995, the last time these figures were computed, dropout rates among U.S.-born Hispanics was 18 percent, compared to 12 percent for U.S.-born black, non-Hispanics, and 9 percent for white, non-Hispanics.

public assistance. In 1998 the unemployment rate for dropouts was 75 percent higher than for high school graduates (U.S. Department of Education, National Center for Education Statistics, 2000, Figure 24). Even if they find a job, dropouts earn substantially less than high school graduates. A study by the U.S. Census Bureau found that more than one-third of all high school dropouts who were employed full-time and year-round in 1990 worked in "low wage" jobs that paid less than \$12,195 per year—the official poverty rate for a family of four (U.S. Bureau of the Census, 1992). Higher rates of unemployment and lower earnings cost the nation both lost productivity and reduced tax income. Dropouts cost the nation money in other ways as well. Research demonstrates that dropouts are also more likely to have health problems, engage in criminal activities, and become dependent on welfare and other government programs than high school graduates (Rumberger, 1987). These problems generate large social costs. In one city alone it was estimated that a year's cohort of dropouts from the city school system would cost \$3.2 billion in lost earnings and more than \$400 million in social services (Catterall, 1987).

Recent concern for dropouts is also fueled by a number of economic, demographic, and educational trends that could exacerbate this problem in the future. One trend is economic: as the United States economy moves toward a higher-skilled labor force, high school dropouts will have an even harder time surviving economically (Murnane & Levy, 1996). A second trend is demographic: the number of students who are generally at greater risk of school failure—students from poor and low-income households, racial, ethnic, and linguistic minorities—are increasing in the nation's schools (Levin, 1986; Natriello et al., 1990). The third trend is the growing push for accountability in the nation's public schools that has produced policies to end social promotion and to institute high school exit exams, both of which could increase the number of students who fail to complete high school (Heubert & Hauser, 1999).

This paper examines why students drop out of school and what can be done about it. The next section of paper examines why students drop out, focusing on both individual and institutional factors, and how these factors can or cannot explain differences in dropout rates among social groups. The next section of the paper examines various strategies to address the dropout, reviewing examples of both programmatic and systemic solutions, and the extent to which policy can promote them. The final section of the paper discusses whether the United States has the capacity and political will to reduce dropout rates and eliminate disparities in dropout rates among racial and ethnic groups.

### Why Students Drop Out of School

Understanding why students drop out of school is the key to addressing this major educational problem. Yet identifying the causes of dropping out is extremely difficult to do because, like other forms of educational achievement (e.g., test scores), it is influenced by an array of proximal and distal factors related to both the individual student and to the family, school, and community settings in which the student lives.

The complexity of this phenomenon is illustrated by the variety of reasons that dropouts report for leaving school. Dropouts from the National Education Longitudinal Study of 1988 eighth graders reported a wide variety of reasons for those who dropped out: school-related reasons were mentioned by 77 percent, family-related reasons were mentioned by 34 percent, and work-related reasons were mentioned by 32 percent (Berkold et al., 1998, Table 6). The most specific reasons were “did not like school” (46 percent), “failing school” (39 percent), “could not get along with teachers” (29 percent), and “got a job” (27 percent). But these reasons do not reveal the underlying causes of why students quit school, particularly those causes or factors that long ago may have contributed to students’ attitudes, behaviors, and school

performance immediately preceding their decision to leave school. Moreover, if many factors contribute to this phenomenon over a long period of time, it is virtually impossible to demonstrate a causal connection between any single factor and the decision to quit school. Instead, scholars are limited to developing theories and testing conceptual models based on a variety of social science disciplines and using a variety of qualitative and quantitative research methods.

A number of theories have been advanced to understand the specific phenomenon of dropping out (e.g., Finn, 1989, Wehlage et al., 1989). Other theories have been used to explain dropping out as part of larger phenomenon of student achievement (e.g., Coleman, 1988; Newmann et al., 1992; Ogbu, 1992).<sup>3</sup> These theories come from a number of social science disciplines—including psychology, sociology, anthropology, and economics—and identify a range of specific factors related to dropping out.<sup>4</sup> Drawing on these theories, I present two conceptual frameworks that focus on two different perspectives for understanding this phenomenon. One framework is based on an individual perspective that focuses on individual factors associated with dropping out; the other is based on an institutional perspective that focuses on the contextual factors found in students’ families, schools, communities and peers. Both frameworks are useful and, indeed, necessary to understand this complex phenomenon. After presenting each framework and reviewing briefly some empirical evidence that highlights some of the most important factors within each framework, I will discuss the extent to which these frameworks can be used explain differences in dropout rates among social groups,

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<sup>3</sup>The extent to which general theories of student achievement can be used to explain the specific phenomenon of school dropout is rarely questioned. Yet theories that may be useful in explaining differences in achievement outcomes such as test scores or grades may not necessarily be useful in explaining why some students drop out of school, especially to the extent that dropping out is unrelated to academic achievement as dropout theories suggest.

<sup>4</sup> Often the factors associated with dropping out are identified as “risk factors” because they denote characteristics of the individual or environment associated with an increased risk of dropping out. But some scholars have pointed out the need to also identify “protective factors” that promote successful development and buffer the effects of risk factors (e.g., Jessor, 1993; National Research Council, Panel on High-Risk Youth, 1993).

particularly racial and ethnic minorities. In most cases, the factors identified in this review are derived from multivariate statistical models that control for a number of other predictive factors, which suggests that the identified factor has a direct, causal connection with dropping out independent of other causal factors. Yet statistical models can only suggest but not prove causal connections, so it is better to think of these factors as predictive of dropping out or increasing the risk of dropping out.

### Individual Perspective

The first framework is based on an individual perspective that focuses on the attributes of students—such as their values, attitudes, and behaviors—and how these attributes contribute to their decisions to quit school. The conceptual framework, illustrated in Figure 2, views the attitudes and behaviors of students through a particular concept—*student engagement*. Several theories have been developed in recent years that all suggest dropping out of school is but the final stage in a dynamic and cumulative process of disengagement (Newmann et al., 1992; Wehlage et al., 1989) or withdrawal (Finn, 1989) from school. Although there are some differences among these theories, they all suggest that there are two dimensions to engagement: academic engagement, or engagement in learning, and social engagement, or engagement in social dimensions of schooling (Wehlage refers to this as school membership). Engagement is reflected in students' attitudes and behaviors with respect to both the formal aspects of school (e.g., classrooms and school activities) and the informal ones (e.g., peer and adult relationships). Both dimensions of engagement can influence the decision to withdraw from school. For example, students may withdraw from school because they quit doing their schoolwork (academic engagement), or because they do not get along with their peers (social engagement).<sup>5</sup>

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<sup>5</sup> Because engagement concerns both the academic and social aspects of schooling, it provides a more comprehensive concept than some others, such as motivation or effort, that focus on only the academic aspect of schooling.

The framework also suggests that dropping out represents one aspect of three inter-related dimensions of educational achievement: (1) academic achievement, as reflected in grades and test scores, (2) educational stability, which reflects whether students remain in the same school (school stability) or remain enrolled in school at all (enrollment stability), and (3) educational attainment, which is reflected by years of schooling completed and the completion of degrees or diplomas. The framework suggests that educational attainment is dependent on both educational stability and academic achievement. That is, students who either interrupt their schooling by dropping out or changing schools, or who have poor academic achievement in school, are less likely to graduate or complete that segment of schooling.

The framework also posits that engagement and educational achievement are influenced by students' background prior to entering school, including their educational aspirations and past achievement. Finally, the framework suggests reciprocal relationships among these factors that change over time: changes in engagement, stability, and achievement as students' progress through school affect later attitudes, social relationships, and school experiences. Thus, within this framework, student stability is viewed as both a cause and a consequence of engagement in school.

A large body of empirical research has identified many individual predictors of dropping out that are consistent with this framework. Only some of the most important ones will be reviewed here.

The first group of factors has to do with the relationship between dropping out and other dimensions of educational achievement. One of those dimensions is student mobility. A growing body of research suggests that both residential mobility (changing residences) and school mobility (changing schools) increases the risk of dropping out of high school (Astone & McLanahan, 1994; Haveman et al., 1991; Rumberger, 1995; Rumberger & Larson, 1998;

Swanson & Schneider, 1999; Teachman et al., 1996). Some scholars have argued that student mobility represents a less severe form of student disengagement or withdrawal from school (Lee & Burkam, 1992; Rumberger & Larson, 1998). In fact, one study found that majority of high school dropouts changed high schools at least once before withdrawing, while the majority of high school graduates did not (Rumberger et al., 1998). Another factor is academic achievement. Numerous studies have found that poor academic achievement is a strong predictor of dropping out (Ekstrom et al., 1986; Goldschmidt & Wang, 1999; Rumberger, 1995; Rumberger & Larson, 1998; Swanson & Schneider, 1999; Wehlage & Rutter, 1986).

Student engagement has also been shown to predict dropping out even after controlling for the effects of academic achievement and student background. Absenteeism, the most common indicator of overall student engagement, and student discipline problems are both associated with dropping out (Bachman et al., 1971; Carbonaro, 1998; Ekstrom et al., 1986; Goldschmidt & Wang, 1999; Rumberger, 1995; Rumberger & Larson, 1998; Swanson & Schneider, 1999; Wehlage & Rutter, 1986). These studies support the idea that dropping out is influenced by both the social and academic experiences of students. In other words, dropping out is not simply a result of academic failure.

Finally, a number of student background characteristics have been shown to predict withdrawal from school. Several demographic variables have been examined in the literature: gender, race and ethnicity, immigration status, and language background (Fernandez, Paulsen, Hirano-Nakanishi, 1989; Goldschmidt & Wang, 1999; Rumberger, 1983, 1995; Steinberg, Blinde, Chan, 1984; Velez, 1989). These factors are discussed in more detail below. Other individual attributes have also been shown to predict school dropout, including low educational and occupational aspirations, and teenage parenthood (Ekstrom et al., 1986; Rumberger, 1995;

Rumberger & Larson, 1998; Newmann et al., 1992; Pirog & Magee, 1997; Swanson & Schneider, 1999; Wehlage & Rutter, 1986).

As mentioned earlier, the framework is based on the idea that student disengagement and withdrawal from school is a long-term process that can be influenced by students' early school experiences. Several studies, based on long-term studies of cohorts of students, have examined the predictors of dropping out from as early as first grade (Alexander et al., 1997; Barrington & Hendricks, 1989; Cairns et al., 1989; Ensminger & Slusacick, 1992; Garnier, Stein, & Jacobs, 1997; Morris, Ehren, & Lenz, 1991; Roderick, 1993). These studies found that early academic achievement and engagement (e.g., attendance, misbehavior) in elementary and middle school predicted eventual withdrawal from high school.

To illustrate, Roderick (1993) examined the school transcript data for one cohort of seventh grade students from a small urban school district in Massachusetts in the 1980s. She examined academic grades, social grades, and attendance from the 4<sup>th</sup> grade until students left school. Academic grades for dropouts from each grade and high school graduates in the bottom, middle, and top third of the high school graduating class are shown in Figure 3. The data show that differences in academic grades appear as early as fourth grade and that dropouts show a pattern of deteriorating grades prior to leaving school. Social grades and attendance show similar patterns. These data further support the idea that dropping out can be characterized as a long-term process of disengagement from school that is manifested in both academic and social performance.

One additional indicator of prior school performance has received considerable attention of late—retention. Historically, a large number of students are retained in school each year. Data from National Education Longitudinal Study suggest that about one in five 8<sup>th</sup> graders in 1988 had been retained at least once since first grade (Rumberger, 1995, Table 1). As more

states end social promotion and institute high school exit examination, this number will no doubt rise. Already in Texas, which has instituted both policies, one out of every six 9<sup>th</sup> grade students in 1996-97 was retained (Texas Education Agency, 1998, Appendix A). Although some recent studies have suggested that retention may have some positive effects on academic achievement (Alexander et al., 1994; Roderick et al., 1999), virtually all the empirical studies to date suggest that retention, even in lower elementary grades, significantly increases the likelihood of dropping out (Goldschmidt & Wang, 1999; Grisson & Shepard, 1989; Jimerson, 1999; Kaufman & Bradby, 1992; Roderick, 1994; Roderick, Nagaoka, Bacon, & Easton, 2000; Rumberger, 1995; Rumberger & Larson, 1998). For example, Rumberger (1995) found that students who were retained in grades 1 to 8 were four times more likely to drop out between grades 8 and 10 than students who were not retained, even after controlling for socioeconomic status, 8<sup>th</sup> grade school performance, and a host of background and school factors.

### Institutional Perspective

While the first framework can provide a way to understand dropping out from an individual perspective, individual attitudes and behaviors are shaped by the institutional settings where people live. This latter perspective is common in such social science disciplines as economics, sociology, and anthropology. Historically it has been less common in psychology, which has focused more on human behavior itself and less on the social environment in which behavior takes place. But over the last decade a new paradigm has emerged in the field of developmental psychology called *developmental behavioral science* (Jessor, 1993). This paradigm, illustrated in Figure 4, recognizes that the various settings or contexts in which students live—families, schools, and communities—all shape their behavior. This framework was used by a recent National Research Council Panel on High-Risk Youth, who argued that too much emphasis has been placed on "high-risk" youth and their families, and not enough on the

high-risk settings in which they live and go to school (National Research Council, Panel on High-Risk Youth, 1993). This view reflects the new emphasis on contexts and not simply individuals.

Empirical research on dropouts has identified a number of factors within students' families, schools, and communities (and peers) that predict dropping out. Again for brevity, only some of the most important ones are reviewed below.

Family factors. Family background is widely recognized as the single most important contributor to success in school. Although early work by Coleman, Jencks, and others suggested that family background alone could explain most of the variation in educational outcomes (Coleman et al., 1966; Jencks et al., 1972), subsequent research found that much of the influence of family background was mediated through schools. Yet in virtually all research on school achievement family background still exerts a powerful, independent influence. But what aspects of family background matter and how do they influence school achievement?

Much of the empirical research has focused on the structural characteristics of families, such as socioeconomic status and family structure. Research has consistently found that socioeconomic status, most commonly measured by parental education and income, is a powerful predictor of school achievement and dropout behavior (Bryk & Thum, 1989; Ekstrom et al., 1986; McNeal, 1999; Rumberger, 1983; Rumberger, 1995; Rumberger & Larson, 1998; Pong & Ju, 2000). Research has also demonstrated that students from single-parent and step families are more likely to drop out of school than students from two-parent families (Astone & McLanahan, 1991; Ekstrom et al., 1986; Goldschmidt & Wang, 1999; McNeal, 1999; Rumberger, 1983; Rumberger, 1995; Rumberger & Larson, 1998; Teachman et al., 1996). However, one recent study found that a change in dissolution of two-parent families did not increase the likelihood of dropping out apart from its effects on income loss (Pong & Ju, 2000).

Until recently, there has been relatively little research that has attempted to identify the underlying processes through which family structure influences dropping out. The powerful effects of parental education and income are generally thought to support human capital theory. According to human capital theory, parents make choices about how much time and other resources to invest in their children based on their objectives, resources, and constraints which, in turn, affects their children's tastes for education (preferences) and cognitive skills (Haveman & Wolfe, 1994). Parental income, for example, allows parents to provide more resources to support their children's education, including access to better quality schools, after school and summer school programs, and more support for learning within the home.

Sociologist James Coleman argued that human capital (parental education) and financial capital (parental income) were insufficient to explain the connection between family background and school success. He argued that social capital, which is manifested in the relationships parents have with their children, other families, and the schools, also influences school achievement independent of the effects of human and financial capital (Coleman, 1988). Although Coleman relied on indirect measures (e.g., family structure) of social capital in his research, some recent studies with more direct measures of family relationships have confirmed that strong relationships between students and parents reduce the odds of dropping out of school (McNeal, 1999; Teachman et al., 1996).<sup>6</sup> Social capital actually represents part of a larger research literature on the role of families in promoting student achievement, including parental involvement (Epstein, 1990; Suichu & Willms, 1996) and types of parental practices known as "parenting style" (Baumrind, 1991; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Empirical studies have found that students whose parents monitor and regulate their activities, provide emotional support, encourage

independent decision-making (known as authoritative parenting style), and are generally more involved in their schooling are less likely to drop out of school (Astone & McLanahan, 1991; Rumberger et al., 1990; Rumberger, 1995).

School factors. It is widely acknowledged that schools exert powerful influences on student achievement, including dropout rates. But demonstrating the influence of schools and identifying the specific school factors that affect student achievement presents some methodological challenges. The biggest challenge is disentangling the effects of student and family background from the effects of school factors. Recent developments in statistical modeling have allowed researchers to more accurately estimate school effects after controlling for the individual background characteristics of students (Lee, 2000; Raudenbush & Willms, 1995).

The overall influence of schools on dropping out is illustrated in Figure 5. The left panel shows the estimated 10<sup>th</sup> grade dropout rates for a sample of 247 urban and suburban high schools in 1990. The median dropout rate is 4.2 percent, which means about 4 out of every 100 10<sup>th</sup> grade students dropped out of the “average” high school in the sample. However, the dropout rate for individual schools varied from less than 2 percent to over 40 percent. At least some of that variability, however, is due to differences in the background characteristics of students. The right panel shows 10<sup>th</sup> grade dropout rates after adjusting for differences in the background characteristics of students. Although less variable than the unadjusted rates, the adjusted dropout rates still show widespread differences among schools. This suggests schools influence dropout rates.

But what factors account for these differences? Four types of school characteristics have been shown to influence student performance: (1) student composition, (2) resources, (3)

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<sup>6</sup> As Portes (1998) points out, in using the concept of social capital, it is important to distinguish between the

structural characteristics, and (4) processes and practices. The first three factors are sometimes considered as school inputs by economists and others who study schools because they refer to the “inputs” into the schooling process that are largely “given” to a school and therefore not alterable by the school itself (Hanushek, 1989). The last factor refers to practices and policies that the school does have control over and thus can be used to judge a school’s effectiveness (Shavelson et al., 1987). Yet all the characteristics of schools could be altered through policy, as suggested in the next section of the paper.

(1) *Student composition.* Student characteristics not only influence student achievement at an individual level, but also at an aggregate or social level. That is, the social composition of students in a school can influence student achievement apart from the effects of student characteristics at an individual level (Gamoran, 1992). Several studies have found that the social composition of schools predicts school dropout rates even after controlling for the individual effects of student background characteristics (Bryk & Thum, 1989; McNeal, 1997b; Rumberger, 1995; Rumberger & Thomas, 2000).

(2) *School resources.* Currently, there is considerable debate in the research community about the extent to which school resources contribute to school effectiveness (Hanushek, 1997; Hedges et al., 1994). Several studies suggest that resources influence school dropout rates. Two studies found that the pupil/teacher ratio had a positive and significant effect on high school and middle school dropout rates even after controlling for a host of individual and contextual factors that might also influence dropout rates (McNeal, 1997b; Rumberger, 1995; Rumberger & Thomas, 2000). One of those studies found that the higher the quality of the teachers as perceived by students, the lower the dropout rate, while the higher the quality of teachers as perceived by the principal, the higher the dropout rate (Rumberger & Thomas, 2000).

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relationships themselves and the access to resources that such relationships provide.

(3) *School structure.* There is also considerable debate in the research community on the extent to which structural characteristics (e.g., size, location), particularly type of control (public, private), contribute to school performance. This issue has been most widely debated with respect to one structural feature—public and private schools (Bryk et al., 1993; Chubb & Moe, 1990; Coleman & Hoffer, 1987). Although widespread achievement differences have been observed among schools based on structural characteristics, what remains unclear is whether structural characteristics themselves account for these differences or whether they are related to differences in student characteristics and school resources often associated with the structural features of schools. Most empirical studies have found that dropout rates from Catholic and other private schools are lower than dropout rates from public schools, even after controlling for differences in the background characteristics of students (Bryk & Thum, 1989; Coleman & Hoffer, 1987; Evans & Schwab, 1995; Neal, 1997; Rumberger & Thomas, 2000; Sander & Krautman, 1995). Yet empirical studies have also found that students from private schools typically transfer to public schools instead or before dropping out, meaning that student turnover rates in private schools are not statistically different than turnover rates in public schools (Lee & Burkam, 1992; Rumberger & Thomas, 2000). School size also appears to influence dropout rates both directly (Rumberger & Thomas, 2000) and indirectly (Bryk & Thum, 1989), although the largest direct effect appears to be in low SES schools (Rumberger, 1995). This latter finding is consistent with case studies of effective dropout prevention schools that suggest small schools are more likely to promote the engagement of both students and staff (Wehlage, Rutter, Smith, Lesko, and Fernandez, 1989).

(4) *School policies and practices.* Despite all the attention and controversy surrounding the previous factors associated with school effectiveness, it is the area of school processes that many people believe holds the most promise for understanding and improving school

performance. Several studies found academic and social climate—as measured by school attendance rates, students taking advanced courses, and student perceptions of a fair discipline policy—predict school dropout rates, even after controlling for the background characteristics of students as well as the resource and structural characteristics of schools (Bryk & Thum, 1989; Rumberger, 1995; Rumberger & Thomas, 2000). Another study using one of the same data sets, but using different sets of variables and statistical techniques, found no effect of academic or social climate on high school dropout rates after controlling for the background characteristics of students, social composition, school resources, and school structure (McNeal, 1997b).

Current research literature on school dropouts suggests two ways that schools affect student withdrawal. One way is indirectly, through general policies and practices that are designed to promote the overall effectiveness of the school. These policies and practices, along with other characteristics of the school (student composition, size, etc.), may contribute to *voluntary* withdrawal by affecting conditions that keep students engaged in school. This perspective is consistent with several existing theories of school dropout and departure that view student engagement as the precursor to withdrawal (Finn, 1989; Wehlage, Rutter, Smith, Lesko, and Fernandez, 1989).

Another way that schools affect turnover is directly, through explicit policies and conscious decisions that cause students to *involuntarily* withdraw from school. These rules may concern low grades, poor attendance, misbehavior, or being overage that can lead to suspensions, expulsions, or forced transfers.<sup>7</sup> This form of withdrawal is school-initiated and contrasts with the student-initiated form mentioned above. This perspective considers a school's own agency, rather than just that of the student, in producing dropouts and transfers. One metaphor that has been used to characterize this process is discharge: “students drop out of school, schools

discharge students” (Riehl, 1999, p. 231). Several studies, mostly based on case studies, have demonstrated how schools contribute to students’ involuntary departure from school by systematically excluding and discharging “troublemakers” and other problematic students (Bowditch, 1993; Fine, 1991; Riehl, 1999).

Community and Peers. In addition to families and schools, communities and peer groups can influence students’ withdrawal from school. There is at least some empirical evidence that differences in neighborhood characteristics can help explain differences in dropout rates among communities apart from the influence of families (Brooks-Gunn et al., 1993; Clark, 1992; Crane, 1991). Crane (1991) further argues that there is a threshold or tipping point on the quality of neighborhoods that results in particularly high dropout rates in the lowest quality neighborhoods. But Clark (1992), using more recent data, found no evidence of a tipping but did find that the odds of a boy dropping out of school increased substantially as the neighborhood poverty rate increased from 0 to 5 percent.

While these studies find that communities do influence dropout rates, they are unable to explain how they do so. Poor communities may influence child and adolescent development through the lack of resources (playgrounds and parks, after-school programs) or negative peer influences (Brooks-Gunn et al., 1997; Hallinan & Williams, 1990; Wilson, 1987). Community residence may also influence parenting practices over and above parental education and income (Klebanov et al., 1994). Finally, students living in poor communities may also be more likely to have friends as dropouts, which increases the likelihood of dropping out of school (Carbonaro, 1998).

Another way that communities can influence dropout rates is by providing employment opportunities both during or after school. Relatively favorable employment opportunities for

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<sup>7</sup> One specific example is the growth of “zero tolerance” (automatic discharge) for violations of school safety rules

high school dropouts, as evidenced by low neighborhood unemployment rates, appears to increase the likelihood that students will drop out, while more favorable economic returns to graduating, as evidenced by higher salaries of high school graduates to dropouts, tend to lower dropout rates (Bickel & Papagiannis, 1988; Clark, 1992, Rumberger, 1983). Research has also demonstrated that working long hours in high school can increase the likelihood of dropping out (Goldschmidt & Wang, 1999; Seltzer, 1994), although the impact of working in high school depends on the type of job held and on the student's gender (McNeal, 1997a).

### Explaining Racial and Ethnic Differences in Dropout Rates

One of the most challenging educational issues facing the U.S. is understanding and solving the persistent disparities in achievement among racial and ethnic groups. While much of the focus on this issue has centered on student achievement as measured by grades and test scores (e.g., Jencks & Phillips, 1998; Steinberg et al., 1992), there has been considerable attention to understanding and explaining differences in dropout rates (Fernandez et al., 1989; Ogbu, 1989).

Two general approaches have been used to explain differences in dropout rates among racial and ethnic groups. The first approach is based on the idea that differences in dropout rates and other measures of educational achievement can be explained largely by differences in resources and by human and social capital frameworks that suggest these factors affect achievement similarly for all groups. This approach was used by the National Research Council Panel on High-Risk Youth who focused their study on the high-risk settings of family, school, and community to explain the poor outcomes of high-risk and minority students (National Research Council, Panel on High-Risk Youth, 1993). Indeed, the family, school, and community conditions for racial and ethnic minorities in the U.S. are generally much worse than for the

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(Skiba & Peterson, 1999).

white majority. For example, child poverty rates for blacks and Hispanics are more than twice as high as child poverty rates for whites (U.S. Department of Education, National Center for Education Statistics, 2000, Table 21). As a result, minority students are more likely to attend high-poverty schools that have lower levels of resources and poorer learning environments (U.S. Department of Education, 1997).<sup>8</sup> Several empirical studies of dropouts have found that at least half of the observed differences in dropout rates between racial groups can be attributed to differences in family and community characteristics (Fernandez et al., 1989; Rumberger, 1983; Velez, 1989). Another study found that up to half of the observed differences in dropout rates between whites and minorities would be reduced if racial groups attended schools with similar racial and socioeconomic compositions (Mayer, 1991).

The second approach is based on the idea that differences in resources and conventional theories are insufficient to explain differences in achievement among racial and ethnic groups. In particular, critics of the first approach argue that it fails to explain why some minority groups with similar levels of "socioeconomic" background succeed, while other groups do not. Instead, they argue that sociocultural factors—particularly cultural differences in values, attitudes, and behaviors—help explain why some racial and ethnic minorities are successful in American schools and others are not.

Obgu (1989, 1992), one of the best-known proponents of the sociocultural perspective, argues that minorities can be classified into two groups: (1) voluntary minorities who came to the United States by their own choosing (e.g., European- and Asian-Americans), and (2) involuntary minorities who were brought into the United States against their will, either through immigration or domination (e.g., African-Americans and early Mexican-Americans). Voluntary

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<sup>8</sup> Recent reforms may be exacerbating these differences. For example, California's class size reduction program has increased the disparities in the proportion of fully credentialed teachers between high and low poverty schools (Stecher & Bohrnstedt, 2000, Figure 3.4).

and involuntary minorities view school success very differently: “Voluntary minorities do not perceive learning the attitudes and behaviors required for school success as threatening their own culture, language, and identities, [while]...involuntary minorities do not seem to be able or willing to separate attitudes and behaviors that result in academic success from those that may result in linear acculturation or replacement of their cultural identity with White American cultural identity" (Ogbu, 1992, pp. 9-10). Although Ogbu’s perspective offers an appealing explanation of minority groups differences in achievement, empirical support for this perspective is limited (Ainsworth-Darnell, 1998; Cook & Ludwig, 1997; Matute-Bianchi, 1986; Farkas et al., 1990; Gibson, 1997).

Other sociocultural perspectives also suggest differences in attitudes and behaviors of students, peers, and families help explain racial and ethnic differences in achievement. For example, Steinberg, Dornbusch, and Brown (1992) demonstrate that Asians are more successful in school than other ethnic groups because of two cultural beliefs: (1) a belief that not getting a good education will hurt their chances for future success (rather than a belief that a good education will help their chances); and (2) a belief that academic success comes from effort rather than ability or the difficulty of the material.<sup>9</sup> They also find that the contexts of families, schools, and peers influence the achievement of racial and ethnic groups differently. Steele (1997) demonstrates that the social stigma of intellectual inferiority among certain cultural minorities—referred to as stereotype threat—contributes to their lower academic achievement. What has yet to be demonstrated empirically is whether these more recent sociocultural perspectives can help explain racial and ethnic differences in dropout rates.

Despite limited empirical evidence, both socioeconomic and sociocultural perspectives may help explain racial and ethnic differences in dropout rates by emphasizing different causal

mechanisms. Socioeconomic perspectives focus on the fiscal, human, and social resources of families, schools, and communities and their similar influence on the development of students' values and cognitive abilities across all racial and ethnic groups. Sociocultural perspectives focus on cultural differences in the attitudes and behaviors among racial and ethnic groups that influences school success in both the social and academic arenas.

### What Can be Done

The preceding analysis of why students drop out suggests several things about what can be done to design effective dropout intervention strategies. First, because dropping out is influenced by both individual and institutional factors, intervention strategies can focus on either or both sets of factors. That is, intervention strategies can focus on addressing the individual values, attitudes, and behaviors that are associated with dropping out without attempting to alter the characteristics of families, schools, and communities that may contribute to those individual factors. Many dropout prevention programs pursue such *programmatic strategies* by providing would-be dropouts with additional resources and supports to help them stay in school. Alternatively, intervention strategies can focus on attempting to improve the environmental contexts of potential dropouts by providing resources and supports to strengthen or restructure their families, schools, and communities. Such *systemic strategies* are often part of larger efforts to improve the educational and social outcomes of at-risk students more generally. Both strategies are discussed in more detail below.

Second, because dropping out is associated with both academic and social problems, effective prevention strategies must focus on both arenas. That is, if dropout prevention strategies are going to be effective they must be *comprehensive* by providing resources and

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<sup>9</sup> Other scholars have also found cultural differences in achievement motivation (Kao & Tienda, 1995; Suarez-

supports in all areas of students' lives. And because dropouts leave school for a variety of reasons, services provided them must be flexible and tailored to their individual needs.

Third, because the problematic attitudes and behaviors of students at risk of dropping out appear as early as elementary school, dropout prevention strategies can and should begin early in a child's educational career. Dropout prevention programs often target high school or middle school students who may have already experienced years of educational failure or unsolved problems. Similarly, dropout recovery programs must attempt to overcome longstanding problems in order to get dropouts to complete school. Consequently, such programs may be costly and ineffective. Conversely, early intervention may be the most powerful and cost-effective approach to dropout prevention.

The overall conclusion is that there are a variety of potentially effective approaches strategies to designing dropout interventions. Given that conclusion, what evidence do we have of the effectiveness of alternative approaches?

Unfortunately, the evidence on the effectiveness of dropout interventions is generally weak for two fundamental reasons. First, there have been relatively few rigorous evaluations of dropout intervention programs. For example, the General Accounting Office surveyed more than 1,000 dropout programs in the fall of 1986, yet it found only 20 rigorous evaluations of the 479 programs that responded to the survey (U.S. GAO, 1987). Second, the evaluations that do exist often fail to demonstrate program effectiveness. For example, Dynarski and Gleason (1998) reviewed the evaluations of 21 dropout prevention programs funded under the federal School Dropout Demonstration Assistance Program (SDDAP) and found only three programs improved dropout or completion rates. Similarly, Slavin and Fashola (1998) conducted a literature search

of dropout prevention programs with rigorous, experimental evaluations and found only two that were effective.

Despite the dearth of research evidence, case studies of proven or at least promising approaches do exist. These case studies not only provide examples of both programmatic and systemic approaches to dropout prevention, they also have identified some of the features that have contributed to their effectiveness.

### Programmatic Approaches

There are two programmatic approaches to dropout prevention. One approach is to provide supplemental services to students within an existing school program. The second approach is to provide an alternative school program either within an existing school (school within a school) or in a separate facility (alternative school). Both approaches do not attempt to change existing institutions serving most students, but rather create alternative programs or institutions to target students who are somehow identified as at-risk of dropping out.

Supplemental Programs. One example of a supplemental yet comprehensive programmatic approach to dropout prevention is the "Achievement for Latinos through Academic Success" or ALAS program (Gándara, Larson, Mehan, & Rumberger, 1998). ALAS was developed, implemented and evaluated as a pilot intervention program to serve the most at-risk students in a poor, predominantly Latino middle school in the Los Angeles area from 1990 to 1995.

The program specifically targeted two groups of high-risk students: special education students and other students who, because of poor academic performance, misbehavior, and low income, were at greatest risk of school failure. The pilot program served two cohorts of special education students (77 total) and one cohort of 46 high-risk students. Participating students

received the intervention program in conjunction with the regular school program for all three years they remained in the target school.

ALAS was founded on the premise that the youth and school as well as the family and community contexts must be addressed simultaneously for dropout prevention efforts to succeed. Thus, ALAS consists of a series of specific intervention strategies focused on individual adolescents as well as on three contexts of influence on achievement: the family, the school, and the community. The intervention strategies are designed to increase the effectiveness of actors in each context as well as increase collaboration between them. ALAS provides the following specific interventions:

1. ***Remediation of the student's ineffective problem-solving skills regarding social interactions and task performance*** through 10 weeks of problem-solving instruction and two years of follow-up problem-solving training and counseling.
2. ***Personal recognition and bonding activities***, such as praise, outings, recognition ceremonies, certificates, and positive home calls to parents for meeting goals or improving behavior to increase self-esteem, affiliation, and a sense of belonging with the school organization.
3. ***Intensive attendance monitoring***, including period-by-period attendance monitoring and daily follow-ups with parents, to communicate a personal interest in their attendance.
4. ***Frequent teacher feedback to parents and students*** regarding classroom comportment, missed assignments, and missing homework.
5. ***Direct instruction and modeling for parents*** on how to reduce their child's inappropriate or undesirable behavior and how to increase desirable behavior.
6. ***Integration of school and home needs with community services.***

The program was evaluated using an experimental design where high-risk students were randomly assigned to the treatment or a control group and participating special education students were compared to a previous year's cohort of special education students. The evaluation examined enrollment status and credits earned in the final year of the program in 9<sup>th</sup> grade and in the remaining years of high school after the program ended. Evaluation data on mobility, attendance, failed classes, and graduation credits indicate that the ALAS program had a substantial and practical impact on students who received the intervention (Gándara, Larson, Mehan, & Rumberger, 1998). By the end of 9th grade, students in the comparison group had twice the number of failed classes, were four times more likely to have excessive absences, and were twice as likely to be seriously behind in high school graduation credits. These results appear even more remarkable when considering that the participants in this study represent the most difficult to teach students within a pool of students generally viewed as high risk. Nonetheless, these dramatic effects were not sustained. By the end of 12th grade, only 32 percent of the ALAS participants and 27 percent of the comparison students had completed high school. This clearly suggests that in order to increase graduation rates it is necessary to provide an ALAS-type intervention throughout the high school years.

The ALAS dropout prevention program targeted students in middle school who were at-risk of dropping out of school. Although the program was successful while the students were receiving the intervention, the effects were not sustained for long after the program ended. This suggests that, at the secondary level, dropout prevention efforts need to be ongoing.

Is there any evidence that early interventions in elementary school or pre-school could have long-term, sustained effects in reducing dropout rates in secondary school? For example, since the earlier research review suggests that since grade retention is a powerful predictor of

school dropout, programs that reduce the incidence of retention should help reduce the incidence of dropout.

One such pre-school program is the High/Scope Perry Pre-School program (Barnett, 1995). The program targeted 123 African Americans born in poverty and at high risk of failing in school. At ages 3 and 4, the children were randomly divided into a program group who received a high-quality preschool program based on High/Scope's active learning approach and a comparison group who received no preschool program. In the study's most recent phase, 95% of the original study participants were interviewed at age 27. Additional data were gathered from the subjects' school, social services, and arrest records.

The program evaluation found a wide range of social and economic benefits, including reduced crime rates, higher earnings, and reduced welfare dependency. In terms of education, one-third as many preschool program group members as no-preschool program group members graduated from regular or adult high school or received General Education Development certification (71 percent versus 54 percent). These outcomes are quite remarkable considering they occurred 13 years or more after the intervention ended. It suggests that early interventions for persons at-risk of dropping out can be effective.

Alternative programs. The other programmatic approach to dropout prevention is to create alternative school programs that only target students at risk of dropping out. These programs can either operate within regular schools or as separate, alternative schools. They generally provide a complete, but alternative educational program than the one found in regular, comprehensive schools. In addition, they typically provide many of the other support services that are found in supplemental programs.

There have been several evaluations of effective alternative programs: Stern, et al. (1989) evaluated 11 within-school academy programs in California high schools; Wehlage, et al.

(1989) evaluated 12 alternative and 2 comprehensive schools; and Dynarski and Gleason (1998) evaluated 3 within-school and 6 alternative schools in their study. Although the programs differed in the types of students they enrolled, the curricula and services they provided, and the way they were structured, there appear to be several common features among effective programs:

- a non-threatening environment for learning;
- a caring and committed staff who accepted a personal responsibility for student success;
- a school culture that encouraged staff risk-taking, self-governance, and professional collegiality;
- a school structure that provided for a low student-teacher ratio and a small size to promote student engagement.

These reviews clearly illustrate that it is possible to create effective alternative programs to address the needs and promote the learning of students at risk of dropping out. Yet creating successful alternative programs presents a number of challenges. First, programs can have difficulty in attracting students because of negative perceptions by students, parents, and educators that such schools are a dumping group for “bad” students and that they symbolize the failure of the regular system (Dynarski & Gleason, 1998). Some programs have responded to this problem by restricting entry to more motivated at-risk students, which raises questions about the purpose of such schools. Second, because of their low regard, such programs often have a hard time competing for resources with regular school programs.

### Systemic solutions

Systemic solutions have the potential to reduce dropping out in a much large number of students by improving some of the environmental factors in families, schools, and communities

that contribute to dropout behavior. That was the position taken by the National Research Council Panel on High-Risk Youth (1993) who argued:

The primary institutions that serve youth—health, schools, employment, training—are crucial and we must begin with helping them respond more effectively to contemporary adolescent needs. Effective responses will involve pushing the boundaries of these systems, encouraging collaborations between them and reducing the number of adolescents whose specialized problems cannot be met through primary institutions (p.193).

Although the promise of systemic solutions to the dropout problem is great, the reality is not. The reason is simply that systemic changes are extremely difficult to achieve because they involve making fundamental changes in the way institutions work individually and within the system in which they are apart. Despite the difficulty of making such changes, there are examples of effective institutional changes, particularly schools, which have been successful in improving the graduation rates of high-risk students.

One well-known example is Central Park East Secondary School in New York City (van Heusden Hale, 2000). The school enrolls 450 public school students in grades 7 through 12 most of whom are from low-income families and many have a history of average or below-average academic achievement. No selection criteria, tests, or interviews are required to attend the school, which is supported by public education funds. Costs per student are the same as other public high schools.

The school offers an intellectually rigorous and creative education normally associated with elite private schools. Classes are small, averaging 20 students, and the day is organized into two-hour periods, allowing teachers and students enough time to engage in concentrated work in specific areas. Students take two main subject groups--mathematics and science, and social

studies and the humanities. Besides interdisciplinary college-preparatory courses, the school offers career-oriented apprenticeships. It has established high standards and clear expectations for its students. Student performance is regularly assessed through a process in which students explain their work and hear it criticized. To graduate, they must present seven academic projects in specified subjects over two years and defend them before committees of students, teachers, and other adults, much as a Ph.D. candidate defends a thesis.

The school has developed beneficial relationships with parents and the community. The school has worked over time to connect and involve parents in the school overall and in their own child's schooling. They have also formed a number of partnerships with community agencies. In addition, the school has a community service requirement where students spent one morning a week working in community service jobs.

According to CPESS co-director Brigette Belletiere, four specific practices support the school's success:

- Articulation and maintenance of a clear vision and mission that staff carries out.
- Goal-setting in line with the vision.
- Allocation of instructional resources to keep class size small.
- Providing time for ongoing, job-embedded professional development.

The school maintains its progress and continually improves itself through an internal democratic process. The staff develops curricula, assessments, and the criteria for earning a CPESS diploma. They are also held accountable for maintaining the school standards.

Student achievement data documents the school's success. Only 5 percent of the students drop out during their high school years, and more than 90 percent of Central Park East's graduates go on to college. Students have high attendance rates and low incidence of violence.

Case studies have been able to identify schools and describe the salient features that enable them to keep students enrolled and to eventually graduate. These features are similar to those that have been identified for “effective” schools more generally (e.g., Purkey & Smith, 1985; Newman, 1993). While the list of specific features varies from one author to another (e.g., Newman, 1993; Purkey & Smith, 1985; Wehlage et al., 1989),<sup>10</sup> they essentially address two basic features of schools: the commitments and competencies of the people (teachers, administrators, and staff) and the organizational structure (size, staffing ratio, curriculum design, services, etc.). While it remains unclear whether one feature must change before the other, both appear to be necessary. For example, simply adopting “progressive” structural changes, such as site-based management or team teaching, may do little if teachers do not have the requisite commitments and competencies (Newman, 1993). At the same time, certain organizational features, such as small size and shared decision-making, may be necessary to develop and support teachers’ commitment to the institution and to the students it serves (Wehlage, et al., 1989). What also remains unclear is the extent to which it may be necessary to recruit teachers and staff with the necessary commitment and competencies before creating a supportive structure.<sup>11</sup>

Research has been able to identify the features of effective secondary schools which, according to Purkey and Smith (1985), is the first step in the school reform process. But the next step is much harder and thus far has eluded school reformers: *Identifying the resources,*

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<sup>10</sup> Purkey and Smith (1985) generated a list of 13 features of effective schools that are necessary to change the culture of the school. Newman (1993) identified a list of four commitments and competencies required of teachers along with a list of four ideas that he describes as a “loose theory about what is needed to make substantial changes in the current educational system” (p. 9). Wehlage et al. (1989) describes a series of qualities in the school staff, the culture, and the structure of successful dropout prevention schools.

<sup>11</sup> One issue that is rarely discussed in the literature on effective schools is the extent to which teachers are recruited and selected into effective schools. A private conversation with the principal of Central Park East revealed that teachers in that school are interviewed and selected based on a desired set of commitments and competencies, even through the school provides on-going professional development for its teachers. The selection of teachers may be especially important regarding the belief that all students can and should succeed in school.

*technical support, and incentives to transform or restructure existing schools in order to create those features.* Although a number of programs and policies have been instituted by local districts and state and federal governments to support school restructuring at the secondary level, generally these efforts have not had much success, especially in reducing dropout rates.

For example, Dynarski and Gleason (1998) reviewed five school restructuring efforts that were part of the second phase of the federal SDDAP dropout prevention program. These initiatives involved large, multi-million dollar grants for individual schools to restructure so that more students would stay in school in the first place and hence reduce the need for alternative schools or programs. Yet none of these restructured schools significantly reduced dropout rates in relation to comparable schools. As Dynarski and Gleason point out:

The evaluation did not observe much change, however, or even signs of it beginning. Restructuring schools found it easier to add dropout-prevention services than to change teaching and learning. Some initiatives managed to change teaching and learning to a degree, but the changes were fragile and easily undone if district leadership changed or local political contexts shifted (p. 14).

They went on to find that there was little consensus about the source of the dropout problem and, in particular, how faculty and staff may have contributed to it. Consequently, few faculty and staff were eager or willing to change what they were doing. Finally, turnover of district administrators undermined support for change. These findings contrast markedly with the characteristics of effective alternative programs presented earlier where teachers felt accountable for students' success and their programs encouraged risk-taking.

This study suggests that it may be more difficult to transform existing institutions than to create new ones. This may especially be true when it comes to reducing dropout rates in urban high schools. In their study of 207 urban high schools that were attempting major school reform

programs based on the effective schools literature, Louis and Miles (1990) found widespread improvement in a number of areas, such as student behavior, student and staff morale, and staff morale. But even among programs that had implemented their programs for several years and enjoyed improvements in student achievement, improvement in dropout rates were “rarely achieved no matter how long a program had been in operation” (Louis & Miles, 1990, p. 49).

While efforts to restructure secondary schools to reduce dropout have proved elusive, so too have efforts to reform other institutions that serve at-risk youth. One ambitious systemic reform effort was the New Futures Initiative promoted and funded by the Annie E. Casey foundation beginning in 1988. New Futures was an attempt to build new collaborative structures among existing public and private institutions in five cities (Dayton, Ohio; Lawrence, Massachusetts; Little Rock, Arkansas; Pittsburgh, Pennsylvania; Savannah, Georgia) to address the problems of at-risk youth, including school dropout. The key strategy was to establish an oversight collaborative in each city with representation from public and private sector agencies to “identify youth problems, develop strategies, and set timelines for addressing these problems, coordinate joint agency activities, and restructure educational and social services” (White & Wehlage, 1995, p. 24). The collaboratives also included case managers who (1) brokered services among the disparate agencies serving at-risk youth and their families; (2) served as advocates for at-risk youth; and (3) served as the “eyes and ears” of the collaboratives by providing information and feedback to the group about what reforms were needed.

Evaluations of this ambitious, systemic reform effort found that it did little to reduce dropout rates and other problems of at-risk youth (Wehlage, Smith, & Lipman, 1992; White & Wehlage, 1995). White and Wehlage (1995) found several generic problems in trying to establish community collaboration:

1. ***Slippage between policy and action*** because case managers were generally unsuccessful in overcoming the “turf battles” among existing agencies and in getting collaboratives to address them;
2. ***Discord over reform policies*** because of fundamental disagreements over the definitions, causes, and remedies to problems;
3. ***Disjuncture between policy and community conditions*** because of the top-down organization of the collaboratives that resulted in an incomplete understanding of the problems and hence ineffective policies.

These problems were clearly evident in New Futures school reforms and paralleled those found in the earlier evaluation of restructured schools. In particular, “most educators in New Futures schools believed that the problems that created at-risk students were problems inside the students, not inside the school and its curriculum” (Wehlage, Smith, & Lipman, 1992, p. 73). Hence, as found in the other systemic reform effort, there was little incentive or support for changing the fundamental functioning of schools.

### Conclusions

Understanding why students drop out of school is a difficult if not impossible task because, as with other forms of educational achievement, it is influenced by an array of individual and institutional factors. Nonetheless, a review of the theoretical and empirical literature does yield some useful insights into the nature of this problem and what can be done about it. First, dropping out is not simply a result of academic failure, but rather often results from both social and academic problems in school. Second, these problems often appear early in students’ school careers, suggesting the need for early intervention. Third, these problems are influenced by a lack of support and resources in families, schools, and communities. These

findings suggest that reducing dropout rates will require comprehensive approaches both to help at-risk students address the social and academic problems that they face in their lives and to improve the at-risk settings that contribute to these problems. Does the United States have the capacity and political will to reduce dropout rates and eliminate disparities in dropout rates among racial and ethnic groups?

The United States does seem to have the capacity, or at least the potential to develop it. Capacity requires technical expertise to develop and implement effective dropout prevention and recovery programs. A number of proven program models have been developed, implemented, and evaluated to demonstrate this expertise. These program models range from early intervention programs serving pre-school students to supplemental yet comprehensive middle school programs to alternative middle and high school programs.

But to achieve widespread improvement in the dropout problem requires systemic as well as programmatic solutions. And here the expertise does not yet exist. While individual effective schools and their salient features have been identified, large-school systemic solutions to the dropout problem require resources, technical expertise, and incentives to restructure existing schools (Hanushek & Jorgenson, 1996). Such solutions have been tried, but have not succeeded.<sup>12</sup> Research suggests why systemic reforms of schools and other agencies serving youth are problematic, but not how to address them. In their review of the New Futures initiative, White and Wehlage (1995), in fact, conclude that institutional change is too difficult and instead argue for a strategy of building social capital among community members:

Given the goal of building social capital, the criteria for a successful collaborative would shift from delivering services more efficiently to success in fostering community. Social capital contributes to community by fostering networks of

interdependency within and among families, neighborhoods, and the larger community. In building social capital, successful collaboratives will change the role of social service institutions. Resources held by agencies will go to building networks of support that are integral to families and neighborhoods. The shift from delivering services to individual clients to investing in the social capital of whole groups of people appears to be essential if collaboratives are to ultimately improve the life chances of generations of at-risk children (p. 35).

While this approach may appear worthwhile as a way of more effectively challenging resources and providing support to the institutions that serve at-risk youth, the approach is yet unproven. Moreover, it still requires a commitment of resources sufficient to substantially improve the lives of children and families.

This gets to the issue of political will. Does the United States have the political will to invest the resources to substantially reduce dropout rates and eliminate disparities among racial and ethnic groups? The answer appears to be no. One reason for this conclusion is that even programmatic solutions that have demonstrated to be both effective and cost-effective have not been successful in attracting widespread funding. For example, the Perry Pre-School program has been shown to provide social benefits in excess of seven times program costs, yet the United States has yet to fully support pre-school services for low-income youth (Barnett, 1995). And despite several decades of school finance reform to eliminate disparities in the funding of public schools, widespread disparities still exist (e.g., Betts, Rueben, & Danenberg, 2000; Kozol, 1991)

Without eliminating disparities in the resources of families, schools, and communities, it is also unlikely that the United States will ever eliminate disparities in dropout rates among racial and ethnic groups. And those disparities may be more difficult to eliminate in the face of

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<sup>12</sup> Chicago has probably come closest to achieving large-school systemic reform, although widespread variation

increasing racial and ethnic segregation of America's schools (Orfield, Bachmeier, James, & Eitle, 1997). Maybe that is why the National Education Goals Panel, who monitors the intergovernmental body of federal and state officials created in July 1990 to assess and report state and national progress toward achieving the National Education Goals, does not monitor the nation's progress in eliminating the gap in graduation rates between minority and non-minority students.

## References

- Ainsworth-Darnell, J.W. & Downey, D.B. (1998). Assessing the oppositional culture explanation for racial/ethnic differences in school performance. American Sociological Review, *63*, 536-553.
- Alexander, K.K., Entwisle, D.R., & Horsey, C. (1997). From first grade forward: Early foundations of high school dropout. Sociology of Education, *70*, 87-107.
- Alexander, K. L., Entwisle, D. R., & Dauber, S. L. (1994). On the success of failure: A reassessment of the effects of retention in early grades. New York: Cambridge University Press.
- Astone, N.M. & McLanahan, S.S. (1991). Family structure, parental practices and high school completion. American Sociological Review, *56*, 309-320.
- Astone, N.M. & McLanahan, S.S. (1994). Family structure, residential mobility, and school dropout: A research note. Demography, *31*, 575-584.
- Bachman, J. G., Green, S., & Wirtanen, I. D. (1971). Youth in transition, vol III: Dropping out: Problem or symptom? Ann Arbor, MI: Institute for Social Research, The University of Michigan.
- Barnett, W.S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. The Future of Children, *5*, 25-50.
- Barrington, B.L. & Hendricks, B. (1989). Differentiating characteristics of high school graduates, dropouts, and nongraduates. Journal of Educational Research, *82*, 309-319.
- Baumrind, D. (1991). Parenting styles and adolescent development. In R. Lerner, A. C. Petersen, & J. Brooks-Gunn (Eds.), The Encyclopedia of Adolescence, (pp.758-772). New York: Garland.
- Berkthold, J., Geis, S., & Kaufman, P. (1998). Subsequent Educational Attainment of High School Dropouts. Washington, D.C.: U.S. Department of Education.
- Betts, J. R., Rueben, K. S., & Danenberg, A. (2000). Equal resources, equal outcomes? The distribution of school resources and student achievement in California. San Francisco: Public Policy Institute of California.
- Bickel, R. & Papagiannis, G. (1988). Post-high school prospects and district-level dropout rates. Youth & Society, *20*, 123-147.
- Bowditch, C. (1993). Getting rid of troublemakers: High school disciplinary procedures and the production of dropouts. Social Problems, *40*, 493-509.
- Brooks-Gunn, J., Duncan, G. J., & Aber, J. L. (1997). Neighborhood poverty. New York: Russell Sage Foundation.

- Brooks-Gunn, J., Duncan, G.J., Klebanov, P.K., & Sealander, N. (1993). Do neighborhoods influence child and adolescent development? American Journal of Sociology, 99,353-95.
- Bryk, A. S., Lee, V. E., & Holland, P. B. (1993). Catholic schools and the common good. Cambridge, MA: Harvard University Press.
- Bryk, A.S. & Thum, Y.M. (1989). The effects of high school organization on dropping out: An exploratory investigation. American Educational Research Journal, 26,353-383.
- Cairns, R.B., Cairns, B.D., & Necherman, H.J. (1989). Early school dropout: Configurations and determinants. Child Development, 60,1437-1452.
- Cameron, S.V. & Heckman, J.J. (1993). The nonequivalence of high school equivalents. Journal of Labor Economics, 11,1-47.
- Carbonaro, W.J. (1998). A little help from my friend's parents: Intergenerational closure and educational outcomes. Sociology of Education, 71, 295-313.
- Catterall, J.S. (November 1987). On the social costs of dropping out of school. The High School Journal, 71,19-30.
- Chubb, J. E. & Moe, T. M. (1990). Politics, Markets, and America's Schools. Washington, D.C.: Brookings Institution.
- Clark, R. L. (December 1992). Neighborhood effects on dropping out of school among teenage boys. Discussion paper. Washington, D.C.: The Urban Institute.
- Coleman, J. S., Campbell, E., Hobson, C., McPartland, J., Mood, F., Weinfeld, F., & York, R. (1966). Equality of educational opportunity. Washington, D.C.: U.S. Government Printing Office.
- Coleman, J.S. (1987). Families and schools. Educational Researcher, 16,32-38.
- Coleman, J.S. (1988). Social capital in the creation of human capital. American Journal of Sociology, 94,S95-S120.
- Coleman, J. S. & Hoffer, T. (1987). Public and private high schools: The impact of communities. New York: Basic Books.
- Cook, P.J. & Ludwig, J. (1997). Weighing the "burden of 'acting white'": Are there race differences in attitudes toward school. Journal of Policy Analysis and Management, 16, 256-278.
- Crane, J. (1991). The epidemic theory of ghettos and neighborhood effects on dropping out and teenage childbearing. American Journal of Sociology, 96,1226-1259.
- Dornbusch, S.M., Ritter, P.L., Leiderman, P.H., Roberts, D.F., & Fraleigh, M.J. (1987). The relation of parenting style to adolescent school performance. Child Development, 58, 1244-1257.

- Dynarski, M. & Gleason, P. (1998). How can we help? What we have learned from federal dropout-prevention programs. Princeton, N.J.: Mathematica Policy Research, Inc.
- Ekstrom, R.B., Goertz, M.E., Pollack, J.M., & Rock, D.A. (1986). Who drops out of high school and why? Findings from a national study. Teachers College Record, 87,356-373.
- Ensminger, M.E. & Slusacick, A.L. (1992). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. Sociology of Education, 65,95-113.
- Epstein, J.L. (1990). School and Family Connections: Theory, Research, and Implications for Integrating Sociologies of Education and Family. Marriage and Family Review, 15,99-126.
- Evans, W.N. & Schwab, R.M. (1995). Finishing high school and starting college: Do Catholic schools make a difference? The Quarterly Journal of Economics, 110, 941-974.
- Farkas, G., Grobe, R.P., Sheehan, D., & Shuan, Y. (1990). Cultural resources and school success: Gender, ethnicity, and poverty groups within an urban district. American Sociological Review, 55,127-142.
- Fernandez, R.M., Paulsen, R., & Hirano-Nakanishi, M. (1989). Dropping out among Hispanic youth. Social Science Research, 18,21-52.
- Fine, M. (1991). Framing dropouts: Notes on the politics of an urban public high school. Albany, NY: State University of New York Press.
- Finn, J.D. (1989). Withdrawing from school. Review of Educational Research, 59,117-142.
- Garnier, H.E., Stein, J.A., & Jacobs, J.K. (1997). The process of dropping out of high school: A 19-year perspective. American Educational Research Journal, 34, 395-419.
- Gamoran, A. (1992). Social Factors in Education. In M. C. Alkin (Ed.), Encyclopedia of Educational Research, (pp.1222-1229). New York: Macmillan.
- Gándara, P., Larson, K., Mehan, H., & Rumberger, R. (1998). Capturing Latino Students in the Academic Pipeline. Berkeley, CA: Chicano/Latino Policy Project.
- Gibson, M.A. (1997). Complicating the immigrant/involuntary minority typology. Anthropology & Education Quarterly, 28,431-454.
- Goldschmidt, P. & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. American Educational Research Journal, 36, 715-738.
- Grisson, J. B. & Shepard, L. A. (1989). Repeating and dropping out of school. In L. A. Sheppard & M. L. Smith (Editors), Flunking Grades: Research and Policies on Retention, (pp.34-63). New York: Falmer Press.
- Hallinan, M.T. & Williams, R.A. (1990). Students' characteristics and the peer-influence process. Sociology of Education, 63,122-132.

- Hanushek, E.A. (1989). The impact of differential expenditures on school performance. Educational Researcher, 18,45-51, 62.
- Hanushek, E.A. (1997). Assessing the effects of school resources on student performance: An update. Educational Evaluation and Policy Analysis, 19,141-164.
- Hanushek, E. A. & Jorgenson, D. W.(Eds.) Eds. (1996). Improving America's schools: The role of incentives. Washington, D.C.: National Academy Press.
- Haveman, R. & Wolfe, B. (1994). Succeeding generations: On the effects of investments in children. New York: Russell Sage Foundation.
- Haveman, R., Wolfe, B., & Spaulding, J. (1991). Childhood events and circumstances influencing high school completion. Demography, 28,133-157.
- Hedges, L.V., Laine, R.D., & Greenwald, R. (1994). Does money matter? A meta-analysis of studies of the effects of differential school inputs on student outcomes. Educational Researcher, 23,5-14.
- Hess, Jr. G. A. (1995). Restructuring urban schools: A Chicago perspective. New York: Teachers College Press.
- Heubert, J. P. & Hauser, R. M., Eds. (1999). High Stakes: Testing for Tracking, Promotion, and Graduation. Washington, D.C.: National Academy Press.
- Jencks, C., Smith, M., Bane, M. J., Cohen, D., Gintis, H., Heyns, B., & Michelson, S. (1972). Inequality: A reassessment of the effects of family and schooling in America. New York: Basic Books.
- Jencks, C. & Phillips, M. (1998). The Black-White Test Score Gap. Washington, D.C.: Brookings Institution.
- Jessor, R. (1993). Successful adolescent development among youth in high-risk settings. American Psychologist, 48,117-126.
- Jimerson, S.R. (1999). On the failure of failure: Examining the association between early grade retention and education and employment outcomes during late adolescence. Journal of School Psychology, 37,243-272.
- Kao, G. & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. Social Science Quarterly, 76,1-19.
- Kaufman, P. & Bradby, D. (1992). Characteristics of At-Risk Students in the NELS:88. Washington, D.C.: U.S. Government Printing Office.
- Kaufman, P., Kwon, J. Y., Klein, S., & Chapman, C. D. (1999.). Dropout Rates in the United States: 1998. Washington, D.C.: U.S. Department of Education.

- Klebanov, P.K., Brooks-Gunn, J., & Duncan, G.J. (1994). Does neighborhood and family poverty affect mother's parenting, mental health and social support. Journal of Marriage and Family, 56,441-455.
- Klerman, J.A. & Karoly, L.A. (1994). Young men and the transition to stable employment. Monthly Labor Review, 117,31-48.
- Kozol, J. (1991). Savage Inequalities: Children in American Schools. New York: Crown.
- Lee, V.E. (2000). Using hierarchical linear modeling to study social contexts: The case of school effects. Educational Psychologist, 35, 125-141.
- Lee, V.E. & Burkam, D.T. (1992). Transferring high schools: An alternative to dropping out? American Journal of Education, 100,420-453.
- Levin, H. M. (1986). Educational reform for disadvantaged students: An emerging crisis. West Haven, CT: National Educational Association.
- Louis, K. S. & Miles, M. B. (1990). Improving the urban high school: What works and why. New York: Teachers College Press.
- Matute-Bianchi, M.E. (1986). Ethnic identities and patterns of school success and failure among Mexican-descent and Japanese-American students in a California high school: An ethnographic analysis. American Journal of Education, 95,233-255.
- Mayer, S. (1991). How much does a high school's racial and socioeconomic mix affect graduation and teenage fertility rates? In C. Jencks & P. Peterson (Eds.), The Urban Underclass (pp.321-341). Washington, D.C.: Brookings Institution.
- McMillen, M. M., Kaufman, P., & Klein, S. (1997). Dropout rates in the United States: 1995. Washington, D.C.: U.S. Government Printing Office.
- McNeal, R.B. (1997a). Are students being pulled out of high school? The effect of adolescent employment on dropping out. Sociology of Education, 70,206-220.
- McNeal, R.B. (1997b). High school dropouts: A closer examination of school effects. Social Science Quarterly, 78,209-222.
- McNeal, R.B. (1999). Parental involvement as social capital: Differential effectiveness on science achievement, truancy, and dropping out. Social Forces, 78,117-144.
- Morris, J.D., Ehren, B.J., & Lenz, B.K. (1991). Building a model to predict which fourth through eighth graders will drop out of high school. Journal of Experimental Education, 59, 286-293.
- Murnane, R. J. & Levy, F. (1996). Teaching the new basic skills: Principles for educating children to thrive in a changing economy. New York: Free Press.

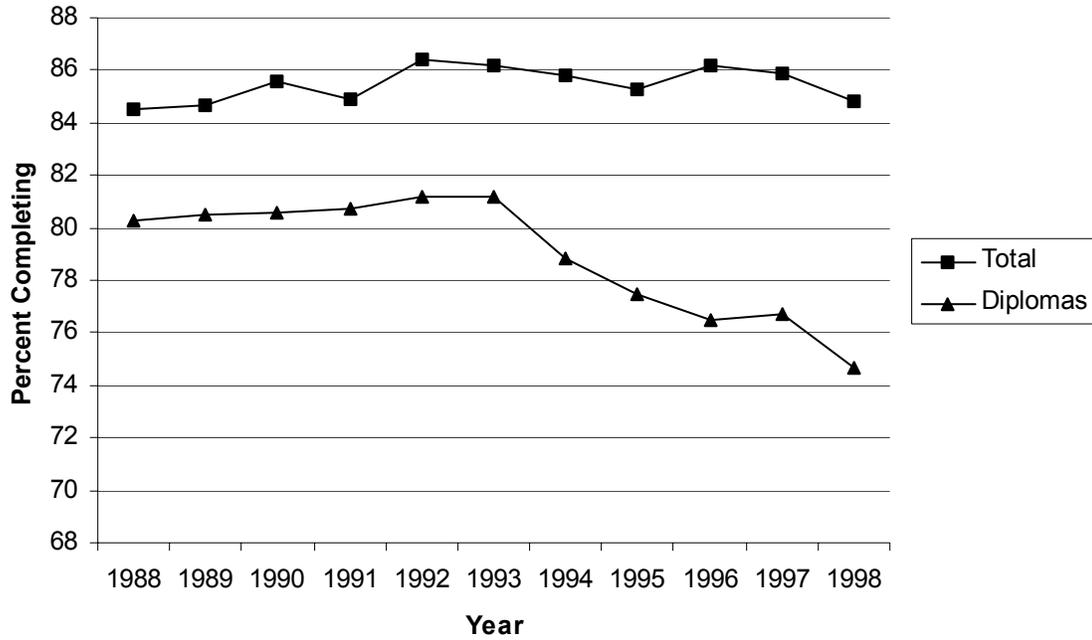
- Murnane, R.J., Willett, J.B., & Boudett, K.P. (1995). Do high school dropouts benefit from obtaining a GED? Educational Evaluation and Policy Analysis, 17, 133-147.
- Murnane, R.J., Willett, J.B., & Boudett, K.P. (1997). Does acquisition of a GED lead to more training, post-secondary education, and military service for school dropouts? Industrial and Labor Relations Review, 51, 100-116.
- Murnane, R.J., Willet, J.B., & Tyler, J.H. (2000). Who benefits from obtaining a GED? Evidence from High School and Beyond. The Review of Economics and Statistics, 82, 23-37.
- National Education Goals Panel. (1999). National Education Goals report: Building a nation of learners, 1999. Washington, D.C.: U.S. Government Printing Office.
- National Research Council, Panel on High-Risk Youth. (1993). Losing generations: Adolescents in high-risk settings. Washington, D.C.: National Academy Press.
- Natriello, G., McDill, E. L., & Pallas, A. M. (1990). Schooling disadvantaged children: Racing against catastrophe. New York: Teachers College Press.
- Newmann, F.M. (1993). Beyond common sense in educational restructuring. Educational Researcher, 22, 4-13, 22.
- Newmann, F. M., Wehlage, G. G., & Lamborn, S. D. (1992). The significance and sources of student engagement. In F. M. Newmann (Ed.), Student engagement and achievement in American secondary schools, (pp.11-39). New York: Teachers College Press.
- Ogbu, J. U. (1989). The individual in collective adaptation: A framework for focusing on academic underperformance and dropping out among involuntary minorities. In L. Weis, E. Farrar, & H. G. Petrie (Eds.), Dropouts from school: Issues, dilemmas, and solutions, (pp.181-204). Albany, NY: State University of New York Press.
- Ogbu, J.U. (1992). Understanding cultural diversity and learning. Educational Researcher, 21, 5-14.
- Orfield, G., Bachmeier, M., James, D.R., & Eitle, T. (1997). Deepening segregation in American public schools: A special report from the Harvard Project on School Desegregation. Equity and Excellence in Education, 30, 5-24.
- Pirog, M.A. & Magee, C. (1997). High school completion: The influence of schools, families, and adolescent parenting. Social science quarterly, 78, 710-724.
- Pong, S.-L. & Ju, D.-B. (2000). The effects of change in family structure and income on dropping out of middle and high school. Journal of Family Issues, 21, 147-169.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. Annual Review of Sociology, 24, 1-24.

- Purkey, S.C. & Smith, M.S. (1985). School reform: The district policy implications of the effective schools literature. The Elementary School Journal, 85, 354-389.
- Raudenbush, S.W. & Willms, J.D. (1995). The estimation of school effects. Journal of Educational and Behavioral Statistics, 20, 307-335.
- Riehl, C. (1999). Labeling and letting go: An Organizational analysis of how high school students are discharged as dropouts. In A. M. Pallas (Ed), Research in Sociology of Education and Socialization, (pp.231-268). New York: JAI Press.
- Roderick, M. (1993). The Path to Dropping Out. Westport, CN: Auburn House.
- Roderick, M. (1994). Grade Retention and School Dropout: Investigating the Association. American Educational Research Journal, 31, 729-759.
- Roderick, M., Bryk, A. S., Jacob, B. A., Easton, J. Q., & Allensworth, E. (1999). Ending Social Promotion: Results from the First Two Years. Chicago: Consortium on Chicago School Research.
- Roderick, M., Nagaoka, J., Bacon, J., & Easton, J. Q. (2000). Update: Ending Social Promotion. Chicago: Consortium on Chicago School Research.
- Rumberger, R.W. (1983). Dropping out of high school: The influence of race, sex, and family background. American Educational Research Journal, 20, 199-220.
- Rumberger, R.W. (1987). High school dropouts: A review of issues and evidence. Review of Educational Research, 57, 101-121.
- Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. American Educational Research Journal, 32, 583-625.
- Rumberger, R.W., Ghatak, R., Poulos, G., Ritter, P.L., & Dornbusch, S.M. (1990). Family influences on dropout behavior in one California high school. Sociology of Education, 63, 283-299.
- Rumberger, R. W. & Lamb, S. P. (1998). The early employment and further education experiences of high school dropouts: A comparative study of the United States and Australia. Paper prepared for the Organization for Economic Co-operation and Development (OECD).
- Rumberger, R.W. & Larson, K.A. (1998). Student mobility and the increased risk of high school drop out. American Journal of Education, 107, 1-35.
- Rumberger, R. W., Larson, K. A., Palardy, G. A., Ream, R. K., & Schleicher, N. A. (1998). The Hazards of Changing Schools for California Latino Adolescents. Berkeley, CA: Chicano/Latino Policy Project.
- Rumberger, R.W. & Thomas, S.L. (2000). The distribution of dropout and turnover rates among urban and suburban high schools. Sociology of Education, 73, 39-67.

- Sander, W. & Krautmann, A.C. (1995). Catholic schools, dropout rates and educational attainment. Economic Inquiry, 33, 217-233.
- Secada, W., Chavez-Chavez, R., Garcia, E., Muñoz, C., Oakes, J., Santiago-Santiago, I., & Slavin, R. (1998). No more excuses: The final report of the Hispanic dropout project. Washington, D.C.: U.S. Department of Education.
- Seltzer, M.H. (1994). Studying variation in Program success: A multilevel modeling approach. Evaluation Review, 18, 342-361.
- Shavelson, R., McDonnell, L., Oakes, J., & Carey, N. (1987). Indicator Systems for Monitoring Mathematics and Science Education. Santa Monica: RAND.
- Skiba, R. & Peterson, R. (1999). The dark side of zero tolerance: Can punishment lead to safe schools? Phi Delta Kappan, 80, 372-376, 381-382.
- Slavin, R. E. & Fashola, O. S. (1998). Show me the evidence! Proven and promising programs for America's schools. New York: Corwin.
- Stanton-Salazar, R.D. (1997). A Social Capital Framework for Understanding the Socialization of Racial Minority Children and Youths. Harvard Educational Review, 67, 1-40.
- Stecher, B. M. & Bohrnstedt, G. W., Eds. (2000). Class size reduction in California: The 1998-99 evaluation findings. Sacramento, CA: California Department of Education.
- Steele, C. (1997). The threat in the air: How stereotypes shape intellectual identify and performance. American Psychologist, 52, 613-629.
- Steinberg, L., Blinde, P.L., & Chan, K.S. (1984). Dropping out among language minority youth. Review of Educational Research, 54, 113-132.
- Steinberg, L., Dornbusch, S.M., & Brown, B.B. (1992). Ethnic differences in adolescent achievement. American Psychologist, 47, 723-729.
- Steinberg, L., Lamborn, S.D., Dornbusch, S.M., & Darling, N. (1992). Impact of parenting practices on adolescent achivement: Authoritative parenting, school involvement, and encouragement to succeed. Child Development, 63, 1266-1281.
- Suarez-Orozco, M. M. & Suarez-Orozco, C. E. (1995). The cultural patterning of achievement motivation: A comparison of Mexican, Mexican immigrant, Mexican American, and non-Latino White American students. In R. G. Rumbaut & W. A. Cornelius (Eds.), California's Immigrant Children: Theory, Research, and Implications for Educational Policy, (pp.161-190). San Diego: Center for U.S.-Mexican Studies, University of California, San Diego.
- Suichu, E.H. & Willms, J.D. (1996). Effects of parental involvement on eighth-grade achievement. Sociology of Education, 69, 126-141.

- Swanson, C.B. & Schneider, B. (1999). Students on the move: Residential and educational mobility in America's schools. Sociology of Education, *72*, 54-67.
- Teachman, J.D., Paasch, K., & Carver, K. (1996). School capital and dropping out of school. Journal of Marriage and the Family , *58*, 773-783.
- Texas Education Agency. (1998). 1996-97 Report on Grade Level Retention. Austin: Texas Education Agency.
- Tyler, J.H., Murnane, R.J., & Willett, J.B. (2000). Estimating the labor market signaling value of the GED. The Quarterly Journal of Economics, *115*, 431-468.
- U.S. Bureau of the Census. (1992). Workers with low earnings. Washington, D.C.: U.S. Government Printing Office.
- U.S. Bureau of the Census. (1999). School enrollment--Social and economic characteristics of students: October 1998. Washinton, D.C.: U.S. Government Printing Office.
- U.S. Department of Education. (1990). National goals for education. Washington, D.C.: U.S. Department of Education.
- U.S. Department of Education. (1998). Goals 2000: Reforming Education to Improve Student Achievement. Washington, D.C.: U.S. Department of Education.
- U.S. Department of Education, National Center for Education Statistics. (2000). Digest of Education Statistics, 1999. Washington, D.C.: U.S. Government Printing Office.
- U.S. Department of Health, Education, and Welfare. (1964). The 1963 Dropout Campaign. Washington, D.C.: U.S. Department of Health, Education, and Welfare.
- van Heusden Hale, S. (2000). Comprehensive school reform: Research-based strategies to achieve high standards. San Francisco: WestEd.
- Velez, W. (1989). High school attrition among Hispanic and Non-Hispanic white youths. Sociology of Education, *62*, 119-133.
- Wehlage, G.G. & Rutter, R.A. (1986). Dropping out: How much do schools contribute to the problem? Teachers College Record, *87*, 374-392.
- Wehlage, G. G., Rutter, R. A., Smith, G. A., Lesko, N., & Fernandez, R. R. (1989). Reducing the Risk: Schools as Communities of Support. New York: Falmer Press.
- Wehlage, G.; Smith, G., & Lipman, P. (1992). Restructuring urban schools: The New Futures experience. American Educational Research Journal. 1992, *29*, 51-93.
- White, J.A. & Wehlage, G. (1995). Community collaboration: If it is such a good idea, why is it so hard to do? Educational Evaluation and Policy Analysis, *17*, 23-38.
- Wilson, W. J. (1987). The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy. Chicago: The University of Chicago Press.

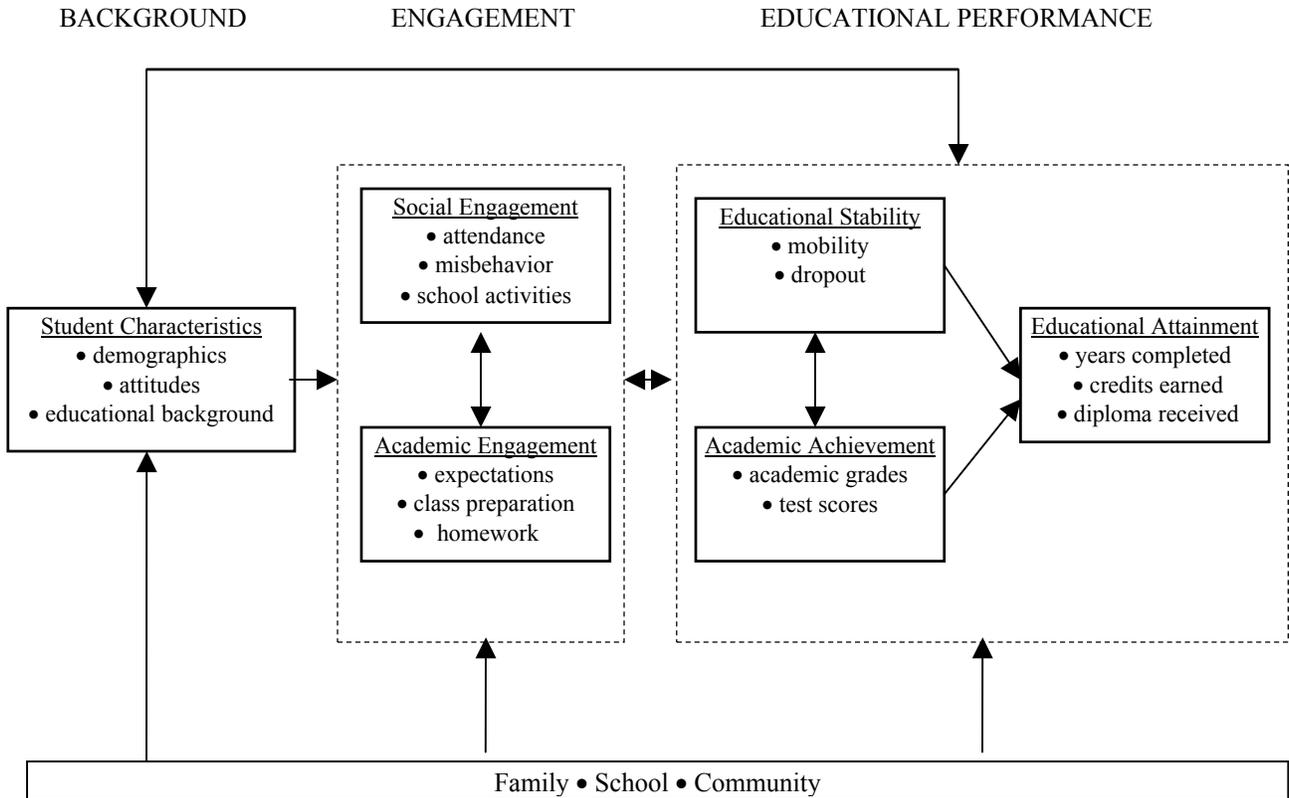
Figure 1  
High School Completion and Graduation Rates of 18-24-year olds  
Not Currently Enrolled in High School or Below: 1988-1998



NOTE: Rates for years 1992-1998 not strictly comparable to earlier years due to changes in Census definitions and data collection procedures. See Kaufman, et al. (1999), Appendix C, for details.

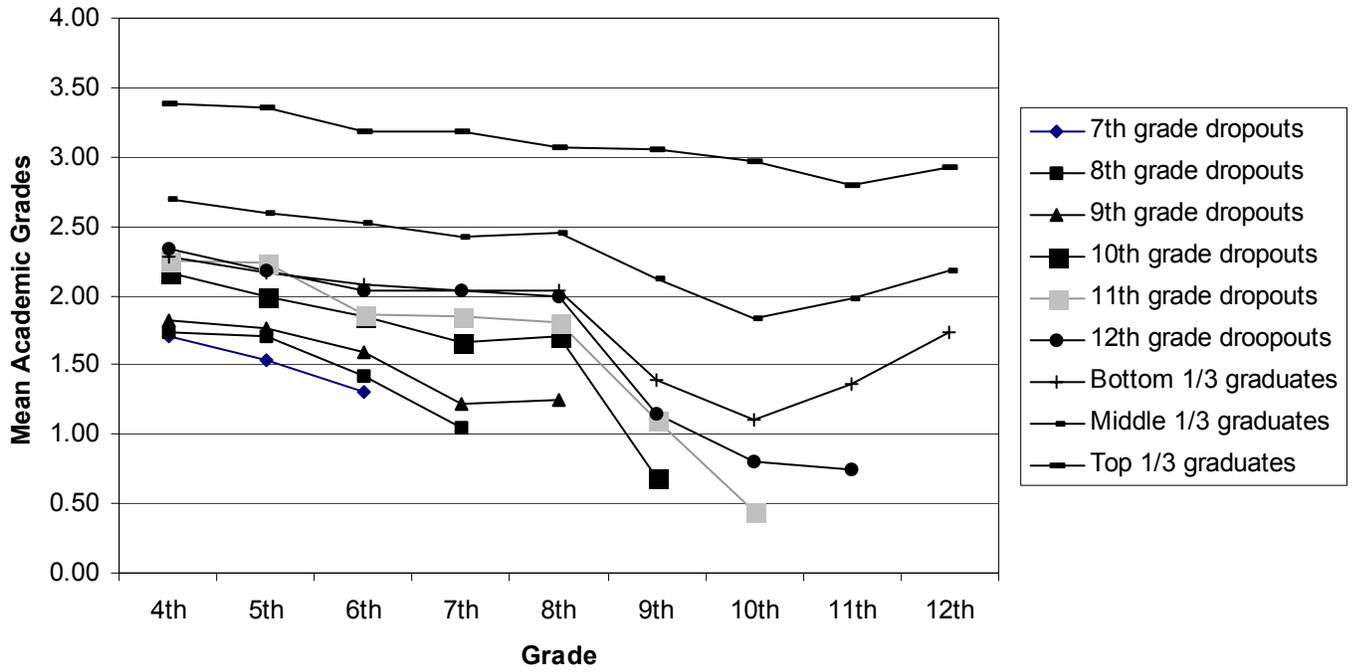
SOURCE: Kaufman, et al. (1999), Table 6.

Figure 2  
 Conceptual Framework for Studying Student Educational Performance



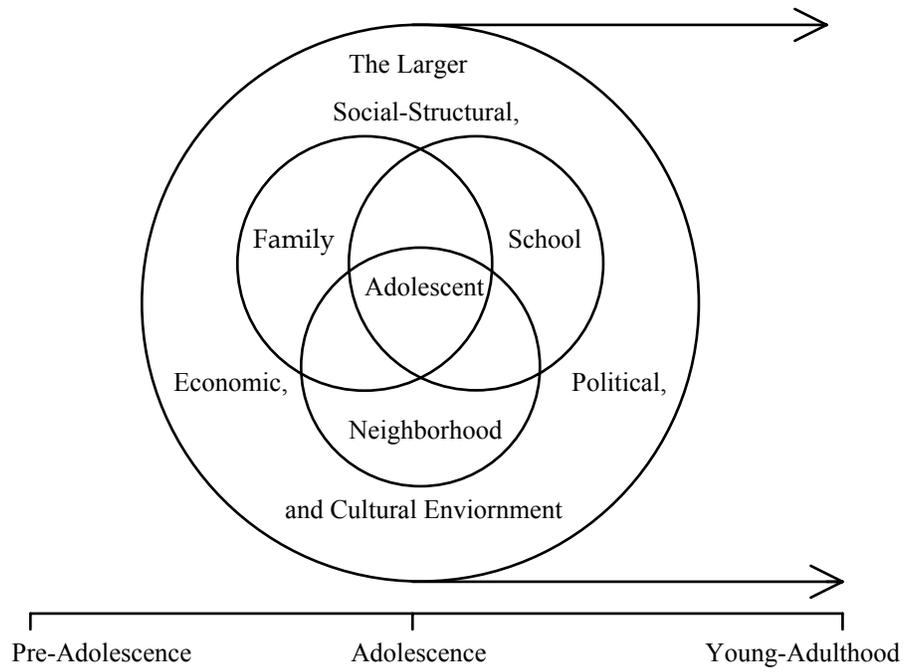
SOUCRE: Rumberger & Larson (1998).

Figure 3  
Trends in Mean Academic Grades for Dropouts and Graduates from a Massachusetts School District



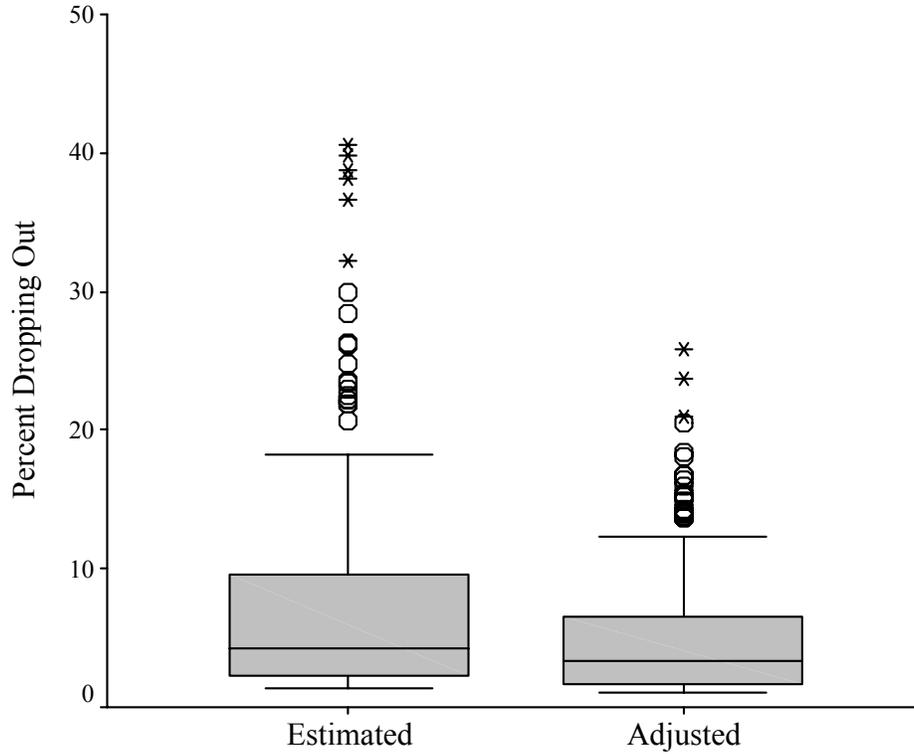
SOUCRE: Roderick (1993), Appendix 4-B.

Figure 4  
The Influence of Context on Adolescent Development Over Time



Source: Jessor (1993), Figure 2.

Figure 5  
Distribution of Estimated and Adjusted 2-Year Dropout Rates  
for 247 Urban and Suburban High Schools, 1990-92



NOTE: Estimated rates were derived from an HLM one-way ANOVA model and unit-specific empirical Bayes residual estimates for each school. Adjusted rates were derived from a fixed coefficient model controlling for student background characteristics and student composition centered on the grand mean and unit-specific empirical Bayes residual estimates for each school.

SOURCE: Rumberger and Thomas (2000), Figure 2.