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Latino Achievement: Identifying Models That Foster Success

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ABSTRACT

This monograph describes the current educational status of Latino students in the United States and, based on the extant research, attempts to explain their relatively low educational performance. The research finds many structural and socio-cultural barriers to academic achievement for this group, including poverty, poor schooling, language differences, low educational levels of parents, and lack of social capital. The monograph then suggests several theoretical models to explain why some Latino students, in spite of all of these barriers, manage to defy the odds and succeed academically. The literature on specific social and academic interventions is examined to distill what is known about fostering high achievement in this population. The theoretical models are then married to the intervention literature to suggest both policies and practices that might be expected to yield greater academic achievement for Latino students in the future.

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Latino[1] Achievement: Identifying Models That Foster Success

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PART 1: Introduction: Why Does Latino Achievement Matter?

Shortly after the turn of the new millennium, Latinos became the nation's largest ethnic minority (Tienda, 2001). The rapidity with which this occurred and the accelerating pace at which the Latino population in the United States is growing give us all pause for concern about how Latino children are faring in American schools. Increasingly, the economic competitiveness and the social well-being of the country depend on the degree to which this population of students can assume positions of leadership in the nation's social and economic structure. As a group, how well are we preparing them to assume such leadership roles? The answer is a sobering, *not well at all*.

Latinos score only slightly better than African Americans on most indicators of academic achievement, but they are at higher risk than all other ethnic groups for failing to complete high school and go on to college (Harvey, 2002). In a study of the impact of specific programmatic interventions on the academic achievement of low income and minority students, Stringfield et al. (1997) and his colleagues found that large achievement gaps between Whites and Latinos in Title 1 (poverty) schools remain relatively constant across the six elementary grades. Based on the Comprehensive Test of Basic Skills (CTBS/4) scores, Latino students lagged about one-half standard deviation behind White students throughout the primary grades in reading. The 2003 National Assessment of Educational Progress (NAEP) showed similar discrepancies. While 41% of White students in the fourth grade scored at or above Proficient, only a little more than a third as many (15%) Latinos reached this level (Donahue, Daane, & Grigg, 2004). At the secondary level, gaps in reading achievement between these groups continue to be very large. For example, in 1998, while 41% of White eighth graders scored at the level of Proficient or higher on the NAEP reading test, only 15% of Latinos scored this highly[2].

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[1] Throughout this monograph the terms "Hispanic" and "Latino" are used interchangeably, as "Hispanic" is the preferred term for national data collection efforts, but Latino is often preferred in the literature and by members of the group. In some cases, data are presented separately for Mexican Americans, the largest subset of the Latino groups, and nationally the most at risk group. The reason for the focus on a particular group, for example, Mexican Americans or Puerto Ricans, is to reduce variation where possible, with respect to the educational experiences of the group in question. For example, some Latino groups, notably Cuban Americans and foreign nationals who enter the U.S. to attend college are not particularly at risk academically, while Mexican Americans or Puerto Rican students consistently fare very poorly in U.S. schools and colleges.

[2] It should be noted that some percentage of Latino students are eliminated from the NAEP testing at the discretion of teachers if they are judged to be too weak in English, thus there is some bias in this sample in favor of higher performing students. Also, the Latino sample in the Prospects Study is likely to be a more advantaged group than is typical in the U.S., since Latino students for whom English was a second language were excluded from this sample.

By the 12th grade, a point at which a significant portion of the lower scoring students have dropped out of school, 47% of White students scored at or above Proficient, and 26% of Latinos were able to reach this level of reading competence (Donahue, Voelkl, Campbell, & Mazzeo, 1999). Twelfth grade NAEP mathematics scores for 2000 reveal an even more troubling picture. While 20% of White students and 34% of Asians scored at or above Proficient, only 4% of Latinos scored this highly (Braswell et al., 2001).

Latino students as a group are also seriously underrepresented at the upper end of the achievement continuum and in programs for the gifted and talented, while White and Asian students are over-represented. Table 1 shows the percentage of each ethnic group participating in K-12 gifted and talented programs in the 1997 school year, the last year for which these data are reported.

Table 1

Percent of Participation in Gifted and Talented Classes by Ethnic Group and Percent K-12 Population, 1997*

Ethnic Group	Percent Gifted	Percent K-12 Population
White	76.61	64.0
Black	6.63	17.0
Hispanic	8.56	14.3
Asian	6.63	3.1
Native American	.90	1.1

Note. From U.S. Department of Education, Office for Civil Rights, 2000.
* 1997 is the most recent year for which these data have been reported by the Office for Civil Rights as of the writing of this monograph.

Table 2 shows the grade point averages (GPAs) for students who took the SAT exam in 1998. This is admittedly a select pool of the nation's students, generally those who envision themselves going on to a 4-year college, but the data make an important point: Even among the most academically ambitious students, there are large discrepancies in achievement by race and ethnicity. Table 2 includes GPAs for Mexican American students, as opposed to all Latinos, as these students are the most numerous of the Latino sub-groups (approximately 58% of all Hispanics) and the most at risk for dropping out of high school (Rumberger & Rodriguez, 2002). It is notable that females outperform males across all ethnic groups, but both Mexican American males and females intending to go to college achieve lower grades than their White and Asian counterparts. The increasing educational gender gap is worthy of special consideration, but to date researchers are only beginning to focus on the reasons why males appear to be underperforming with respect to females, especially in communities of color (Kindlon & Thompson, 2000; Mortenson, 1999). Much work remains to be done in this area.

Table 2

Grade Point Averages for U.S. College-bound Students by Ethnicity and Gender, 1998

Ethnicity	Male	Female
White	3.21	3.37
Mexican American	3.12	3.22
Black	2.75	2.95
Asian	3.29	3.42
Native American	3.01	3.16

Note. From *The College Board, 1998 SAT administration data, 1999a.*

Data on high school completion for Latinos as compared to others provide a picture of Mexican origin Latino students in the college-going pool. Bureau of the Census figures for 2000 show that among all 18-24 year olds, 84.4% of Whites had completed high school, compared to only 59.6% of Hispanics. Further, only about 53% of Hispanics in this age group had enrolled in any type of college for 1 year or more, while just over two-thirds (66.9%) of Whites had gone on to college (Harvey, 2002). The types of colleges that students attend differ substantially by ethnicity as well. Almost two-thirds (64%) of White students attend 4-year colleges where their likelihood of earning a college degree is enhanced considerably over that of Hispanics, who are much more likely to attend 2-year community colleges (56%) where degree completion is the exception rather than the rule (Gándara & Chávez, 2003; Grubb, 1991; Harvey, 2002). As a result, White students are two and one half times more likely to complete 4 or more years of college than are Latino students in the U.S. (Harvey, 2002). Sorensen, Brewer, Carroll, and Bryton (1995) computed the economic benefits that would accrue with increasing the education level of Latinos. They concluded that:

> Hispanics with a bachelor's degree will pay more than twice as much in taxes as those with only a high school diploma, and Hispanics with a professional degree will pay an estimated three times as much as those with a bachelor's degree. (p. 4)

Of course there are many non-pecuniary reasons for increasing the educational level of Latino students. People with higher education enjoy better health and lead longer and more productive lives (Perna & Swail, 1998). They are also more likely to attend arts activities, to vote, and to provide leadership in their communities (Mortenson, 1997). In sum, higher education enriches both the individual and the society. When higher education is curtailed for a population group because of systematic impediments to their intellectual advancement, then both the individual and the society are impoverished. It thus is critical to understand the mechanisms whereby Latino high achievement is both thwarted and fostered.

PART 2: How Latino *Under*achievement Is Explained

Before beginning a discussion of nurturing high achievement among Latino students, it is important to understand the factors that have impeded it. No doubt because Latino students have fared so poorly in our schools for as long as data have been collected on their achievement, researchers have sought to explain this phenomenon. Since the 1960s, when data began to be collected on Latino school performance, a host of studies have focused on the causes of school failure for these students. The logic that drove many of these studies was that if we could identify the problems in these students' environments, then schools could remediate the problems and raise their achievement. The operating assumption was usually that *something outside of school,* and not the schools themselves, was the source of academic failure. Otherwise, how could we explain the fact that many non-Latino students fared just fine in school? Ethnic minorities, and Latinos in particular, were viewed as having fundamental deficits that schools and other government programs could overcome through special interventions such as Head Start (Hess & Shipman, 1965; Valentine, 1968). However, as these efforts appeared to meet with only limited success, researchers cast about for more powerful explanations of Latino school failure. The focus began to shift in the 1970s from a deficit explanation to a cultural difference one.

The cultural difference model was predicated on a notion that these students were not so much "deprived" of important cultural experiences, leaving them incapable of participating meaningfully in school, but that they had a different set of cultural experiences that were inconsistent with the demands of U.S. schooling (Buenning & Tollefson, 1987; Carter & Segura, 1979). One of the chief cultural differences identified by researchers between lower income and middle class students of all ethnicities was speech style (Heath, 1983; Hymes, 1974). This focus on speech and language differences was especially salient for Latino students, as the difference between language of the home and that of the school was an obvious discontinuity in home and school experience. Thus, for many, the "problem" of language difference became the chief explanation for school failure, and bilingual education became the primary means by which to remedy this problem. Later research would demonstrate clearly that language difference was not the only, and perhaps not even the most important, issue facing these students (Mitchell & Mitchell, 1999; Portes & Zhou, 1993; Rumbaut, 1995). As Nieto (1993) pointed out:

> even with a bilingual education, many children are likely to face educational failure . . . . No approach or program can cure all problems, educational and otherwise, facing our young people if it does not also address the fundamental issues of discrimination and stratification in schools and society . . . . Simply substituting one language for another, or books in Spanish with Dick and Jane in brownface, will not guarantee success for language minority students. Expecting too much of even good programs is counterproductive because in the absence of quick results, the children are again blamed for their failures. (p. 205)

Failure of the "easy" unidimensional explanations of Latino underachievement has led to more complex explanations that recognize the multiple social, political, and educational forces at work in school success and failure. This research is rich with explanations, all of which, for some students, under some conditions, almost certainly explain some portion of the variance in achievement.

Parent Income and Educational Background

Table 3 shows data on income and education for all students taking the SAT[3] examinations in 1999. Even though these students tend to be among the most advantaged young people in our society, differences in income and education by ethnicity are dramatic.

Table 3

Parent Education and Income by Ethnicity College-bound Students, 1999

Group	% Parents w/ less than H.S. Diploma	% Parents w/ some college	% Parents w/ income < $20K	% Parents w/ income > $100K
Black (114,912)	5	45	27	3
Mexican American (41,028)	27	30	27	4
Puerto Rican (13,635)	9	47	26	5
Native American (10,159)	4	53	15	9
Asian (94,066)	11	59	21	10
White (704,462)	1	66	5	16

Note. From *The College Board, 1999 SAT administration data, 1999b.*

Table 3 reveals a picture of stark differences among ethnic groups with respect to socio-economic background. Mexican Americans are much more likely than all other groups to have parents without a high school diploma, and much less likely to have parents with *any* college experience. Both Puerto Rican and Mexican origin Latinos (as well as African Americans) are much more likely than White youth to have very low income parents, as they are much less likely to have parents with high incomes. Notably, the combined risks of low educational background and low income are greatest for Mexican origin students, with Puerto Rican students trailing just behind them. Even

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[3] The SAT was formerly known as the Scholastic Aptitude Test, however over time The College Entrance Examination Board has moved away from this title and prefers that the test be known simply as the "SAT." In none of its literature does it provide an explanation for the acronym. As Cloud (2003) notes in a *Time* magazine article on the revisions of the test, "The name of the test will be, simply, the SAT. The letters stand for nothing" (p. 51). This is consistent with The College Board's general policy.

among this most-advantaged slice of American youth, these Latino students stand out with respect to the relatively low level of resources they bring with them to school. Given that parental socio-economic status is the variable that consistently explains the most variance in academic achievement, it is not surprising that Latino students would fare worse than most other students. However, socio-economic status also correlates with background characteristics and opportunities, such as likelihood of attending preschool.

Human and economic capital also frequently convert into *social capital*— knowledge of how "the system" works and access to social networks that help one to navigate that system. Numerous studies have shown how middle class parents, with their knowledge of public institutions and their personal access to persons in authority, can "work the system" for their children. They know how to structure opportunities for their children in school (Lareau, 1989), know how to gain access to the best classes, teachers, and curriculum (Margolin,1994; Useem, 1992), and have the ability to provide cultural opportunities that provide them with advantages in the classroom (DiMaggio, 1982). Some have argued that such social capital may even trump economic capital (Delgado-Gaitán, 1990; Mehan, Villanueva, Hubbard, & Lintz, 1996).

Inadequate Pre-kindergarten Opportunities

Two-thirds of all 4-year-olds nationwide attend some kind of preschool, and slightly more than half attend full-time (National Center for Education Statistics [NCES], 1999). For middle class children, this includes a wide variety of private preschools as well as publicly supported programs in the community. Moreover, for those middle class children who stay at home, many will receive enriched educational opportunities in more informal contexts. Considerable research evidence exists for the short term effects on cognitive functioning, health status, and socio-emotional adjustment of children who attend high-quality preschool programs (Karoly et al., 1998; Zigler & Styfco, 1993). However, for low income children, both the opportunity to attend preschool and the quality of the experiences they will have there are much more limited, and the likelihood that Latino children will attend preschool is lower than for all other groups.

Table 4, taken from the Early Childhood Longitudinal Study, a U.S. Department of Education funded national study that is following children from preschool through elementary school and which began in 1998, displays a somewhat complex picture. Hispanic children are much *less likely* to be in a preschool program than all other students, and they are also much *more likely* to attend kindergarten at a young age without the benefit of having attended preschool. (African American children are the most likely to be in center-based programs, largely due to their high enrollments in Head Start.) Importantly, early enrollment in kindergarten is also associated with higher risk for less positive educational outcomes, especially when kindergarten has not been preceded by preschool attendance (NCES, 1995). Table 5 completes the picture.

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Table 4

Percent of Center-based Preschool and Kindergarten Students (3-5 Years Old) in U.S. by Ethnicity, 1999

Ethnicity	Preschool Age 3	Preschool Age 4	Kindergarten Age 4	Total Age 4	Preschool Age 5	Kindergarten Age 5	Total Age 5
White	46.0	66.2	1.8	69.3	23.1	54.7	92.9
Black	59.2	79.4	1.3	81.4	20.2	55.2	98.5
Hispanic	25.0	56.8	5.8	63.6	13.4	66.2	88.6
Other	56.3	65.0	4.5	70.0	23.4	61.1	97.8

Note. From *U.S. Department of Education, NCES, Digest of Education Statistics, 2000a.*

Table 5

Percent of Kindergartners in Lowest and Highest Quartile of Reading Skills, by Ethnicity,
Fall 1998

Group	Lowest Quartile/ Reading	Highest Quartile/ Reading	Lowest Quartile/ Math	Highest Quartile/Math
Black	34	15	39	10
Latino	42	15	40	14
Asian	13	39	13	38
White	18	30	18	32

Note. From *America's Kindergartners, U.S. Department of Education, NCES, 2000b.*

Of all major ethnic groups, Latinos are the most likely to fall into the lowest quartile on pre-reading and pre-math skills, and the least likely to fall into the highest quartile. One probable reason for their exceptionally low performance on these measures is that significant numbers of Hispanic kindergartners are tested in English when they are not yet proficient in the language. Nonetheless, when these children are also younger than their peers, have not had the benefit of preschool, and are not yet proficient in English, the result is often failure even at the very beginning of their school careers.

High Rates of Residential Mobility

Family residential mobility can also play a large role in the educational achievement of children. Entwisle, Alexander, and Olsen (1997) report that in a study of low income, urban elementary students, those who changed schools within the first five grades were also more likely to have behavioral problems, be retained in grade, and have poorer attendance. Latino youth are especially affected by this mobility, as a significant portion are migrants and many move back and forth across the border following work opportunities and family commitments in Mexico (Olsen, 1997). Both young and adolescent Latinos can be negatively affected by moves that result in school changes; young children are more likely to have school adjustment problems and older Latinos are more likely to drop out of school altogether (Rumberger & Larson, 1998). Of course, not all school changes are the result of family mobility, nor are they always bad. Sometimes children change schools to find a better fit, but this appears to be more common with middle class children than low income Latinos (Rumberger & Larson, 1998). In schools with high proportions of low-income and minority youth in particular, multiple school changes, especially at the secondary level, can also be the result of school practices that transfer students who are perceived to be problems. Fine (1991) describes how such "trouble makers," as perceived by school personnel, are often among the brightest in their classes, but have difficulty "fitting in" at school.

Lack of Peer Support for Academic Achievement

Adolescent peer groups are commonly portrayed as having a negative influence on the values and behavior of youth. Drug and alcohol use, gang membership, and a culture of underachievement are popularly viewed as risks associated with peer influence, and with good reason, since such risky behaviors have been shown to occur in peer clusters (Henderson, 1997). Peers can, however, also have a positive influence on each other. They can support academic goals and serve as important sources of information for upward mobility (Stanton-Salazar, 1997; Steinberg, 1996). But Latino students are more likely to have peers who feel marginalized by school and do not support schooling goals (Gándara, O'Hara, & Gutiérrez, 2004; Hurd, 2004; Steinberg, 1996). Of course, students who hang out with low performing friends tend to perform at lower levels as well (Epstein & Karweit, 1983; Steinberg, 1996) and those whose friends are drop outs are at higher risk for dropping out themselves (Rumberger, 1991). Many Latino students who aspire to high achievement report the problem of being accused of being a "school boy" or "school girl" and thus being shunned by their lower performing peers who may be the arbiters of social acceptability in their schools (Rodriguez, 1982; Steinberg, 1996). Finding a supportive peer group that values high achievement can be exceptionally difficult for Latino students from low income backgrounds and they must thus make the choice between being "popular," and being "smart" (Gándara et al., 2004). Given the importance of peer relations for the development of a healthy identity (Erikson, 1968), it is not particularly surprising that so many Latino students opt for popular over smart.

Racial and Ethnic Stereotyping

Societal beliefs about the intellectual or cultural inferiority of Latinos can result in both constrained opportunities and choices. Claude Steele (1997) has theorized that stereotype vulnerability can explain why many minority students may perform poorly or choose not to participate at all in academic endeavors in which they run the risk of confirming the stereotype that they are intellectually inferior. Through a series of novel experiments in which he manipulated subjects' perceptions of testing conditions and consequences, Steele demonstrated that minority students may *disidentify* (that is, plead lack of interest) with academic goals because of the performance anxiety that is produced by having to compete academically in settings where any mistake can be interpreted as an affirmation of their intellectual inferiority. Steele argues that such *disidentification* can lead to disengagement with academics, as well as to poor testing outcomes. Support for this theory is also found in the ethnographic work of Willis (1977) and McLeod (1987). In these studies, the researchers found that disaffected low income and minority youth rejected the social norms of the society that they perceived had rejected them. However, in assuming the very stereotypes that the society had imposed on them, they inadvertently cooperated in fulfilling the discriminatory prophecies of those who disparaged them.

Extracurricular Involvement and Support

We know that high school students who get involved in extracurricular school activities are more likely to remain in school (Davalos, Chavez, & Guardiola, 1999; Mahoney & Cains, 1997), develop bonds with their teachers (Fletcher & Brown, 1998), identify with school (Marsh & Kleitman, 2002), and experience positive educational trajectories (Brown & Theobald, 1998; Eccles & Barber, 1999). In addition, participation in sports and clubs is correlated positively with higher grades, higher aspirations, higher levels of self-esteem, and improved race relations (Brown & Theobald, 1998; Holland & Andre, 1987; O'Brien & Rollefson, 1995). We know too that participation in these extracurricular activities leads students to acquire "comparatively greater human and social capital" (Flores-Gonzalez, 2002; Quiroz, Flores-Gonzalez & Frank, 1996), and that low income students appear to benefit from these activities even more than their middle class peers (Marsh & Kleitman, 2002). But there is also evidence that low income students are less likely to participate in such activities (Eckert, 1989; McNeal, 1998), as are Latino students (Gibson, Bejínez, Hidalgo, & Rolón, 2004). Thus, the social relationships that help integrate Latino students into the fabric of schooling and provide both social and academic support for schooling are less likely to occur for these students.

Low Expectations From Teachers

While Latino parents may have high aspirations for their children's educational attainment, research also shows that their aspirations are moderated by more realistic *expectations* of what their children are *likely* to achieve (Henderson, 1997). It appears that both parents and students wish for particular academic outcomes, but that these wishes are tempered by a realistic assessment of the constraints imposed by their educational situation (Adelman, 1999). One important constraint on aspirations is the way in which teachers respond to ethnic minority students.

Teachers can be very effective in sending non-verbal messages to students about the amount of confidence they have in their abilities. For example, research has shown that teachers wait longer for an answer from a student they believe knows the answer than from one in whom the teacher has little confidence. In this case, the teacher is more likely to provide the correct answer or move quickly on to another student (Brophy & Good, 1974). Students have also been shown to be very sensitive to these subtle teacher behaviors, to "read" their teachers' attitudes quite accurately (Weinstein, 1989), and arguably, to internalize these attitudes in ways that can reduce achievement (Rist, 1970).

Teachers' assessments of student potential begin at a very early age. Alexander, Entwisle, and Thompson (1987) showed that social distance, that is, difference in social and economic status, between first graders and their teachers resulted in lower expectations and lower assessments of maturity and behavior for low income students. Moreover, these early assessments resulted in lower academic achievement in subsequent years (Entwisle et al., 1997). Because teachers are more likely to assess middle class and non-minority students as having higher ability than their low income and minority peers (Baron, Tom, & Cooper, 1985), inequalities in schooling expectations, access to

demanding curricula, and other schooling opportunities are established early in children's school careers (Barr & Dreeben, 1983). Limited proficiency in English is one characteristic of many Latino students that appears to negatively influence their teachers' assessments of their abilities (Burstein & Cabello, 1989).

Limited English Proficiency

Although data on language proficiency nationally are notoriously unreliable (Council of Chief State School Officers [CCSSO], 1989), estimates of the percentage of Hispanic students who begin school with a language other than English in California—the state with the largest number of English learners—is about 50% (California Department of Education, Language Census Unit, 2001). Thus, a very large percentage of Hispanic students must grapple with the handicap of not knowing sufficient English to fully access the curriculum when they begin school. English learners commonly face classrooms that either do not take their language needs into account or are structured to provide an impoverished curriculum that often does not prepare them to succeed academically (August & Hakuta, 1997; Olsen, Jaramillo, McCall-Pérez, White, & Minicucci, 1999). The Prospects Study (Puma et al., 1997), a federally mandated study of student achievement, found that English learners scored consistently lower than all other children on achievement tests, even when compared to students at similar high-poverty levels. Even highly competent English learners, who may have mastered the curriculum in their primary language, cannot demonstrate this knowledge on tests that are in English only. Abedi (2000) has demonstrated that the test performance of English learners is significantly affected by the complexity of the language of the test, even in areas that do not purport to assess English competence. Thus, low test scores and failure to achieve at expected levels often lead to lower expectations on the part of teachers and placement in low level and remedial courses (Minicucci & Olsen, 1992).

Inequalities in K-12 Schooling

Quality of Instructional Offerings

The particular school that a student attends can have a significant impact on his or her academic achievement. Schools in more affluent neighborhoods have been shown to provide more rigorous college preparatory and honors courses than schools in lower income communities that largely serve populations of underrepresented students. For example, in a recent study of California schools, Betts, Rueben and Danenberg (2000) found that the lowest income schools offered only 52% of their classes as meeting college preparatory requirements, while this figure rose to 63% in the highest income schools. Similar patterns held up when the analysis was done by percentage of non-White students in the school. Likewise, Betts et al. found that "the median high-SES school has over 50 percent more Advanced Placement courses than the median low-SES school" (p. 72). Based on analyses of High School and Beyond data, Adelman (1999) concluded that the rigor of the curriculum to which students are exposed is more predictive of long term academic outcomes than even the powerful variable of family socio-economic status. That is, Adelman argues that the greatest amount of the variance in long term academic outcomes among ethnic groups can be

attributed to the differences in the groups' exposure to high level curricula—most particularly to advanced mathematics. Table 6 demonstrates this using data from California showing that Latino students are the least likely of all groups to complete the required courses for 4-year college admission.

Table 6

Public High School Graduates Completing Required Courses for 4-Year College Admission, California, 1999-2000

Mixed Race	**Latino**	American Indian	Black	Pacific Islanders	White	Filipino	Asian
15.7%	**21.5%**	23.4%	24.7%	25.7%	40.2%	45.4%	57.9%

Note. From *California Basic Educational Data File 1999-2000*.

Quality of Teachers

Not only are schools in more affluent areas better organized to provide more rigorous curricula, they also tend to have better prepared teachers (Betts et al., 2000; Ferguson, 1998; Haycock, 1998). However, Haycock (1998) demonstrates that children of color, regardless of their socio-economic level, are more likely to be taught by teachers with lower test scores and less academic preparation than are White children. And the quality of the teacher, measured by certification, quality of institution from which the teacher received his or her degree, and test scores, has been shown in a number of studies to have a significant impact on student performance (Darling-Hammond, Berry, & Thoreson, 2001).

Segregation of Minority Students Within and Between Schools

Racial and ethnic segregation continues to have an impact on school performance for underrepresented students. Inequalities in educational opportunity between segregated White schools and segregated schools with students of color have been well documented (Orfield & Eaton, 1996) and served as the catalyst for a decades-long experiment with desegregation and busing. That experiment has largely come to an end. Today, both Black and Latino students attend increasingly segregated schools. Latino segregation has been increasing since data were first collected in the 1960s. In 1997, 35.4% of Latino students were attending schools that were 90 to 100% minority (Orfield & Yun, 1999). And as Orfield (1996) points out:

> Low-income and minority students are concentrated in schools within metropolitan areas that tend to offer different and inferior courses and levels of competition, creating a situation where the most disadvantaged students receive the least effective preparation for college. A fundamental reason is that schools do not provide a fixed high school curriculum taught at a common depth and

pace. The actual working curriculum of a high school is the result of the ability of teachers, the quality of counseling, and enrollment patterns of students. (p. 67)

PART 3: Defying the Predictions: Explaining Latino High Achievement

The litany of reasons given in the extant literature for Latino underachievement provides an excellent rationale for why they fare so poorly in public schools. In fact, it is difficult to imagine that they would perform otherwise, considering the multiple impediments to high achievement that they face. However, some Latino students fare exceptionally well, in spite of coming from backgrounds that would predict academic failure. Less attention has been devoted to studying those who defy the predictions, but some researchers have attended to this issue, and while the focus is seldom on Latino students specifically, there is a considerable body of literature that can be applied to the task of understanding Latino high achievement in adverse circumstances. Relevant literature is found in at least four different disciplinary traditions: psychology, sociology, anthropology, and education. Each takes a different perspective on explaining the phenomenon. Figure 1 displays a map of these theoretical perspectives.

The discussion that follows is in no way exhaustive of the relevant literature. For each researcher or study cited, a dozen more could have been included. However, the attempt here is to cover the major strands of research and some of the most well known and broadly published of the proponents of those perspectives.

Psychological Perspectives

Psychological theories attempt to explain achievement phenomena from an intra-personal perspective. That is, the primary source of achievement motivation is believed to be found in the internal cognitive and psychological processes of the individual. High achievement in the face of adverse circumstances is theorized to occur as a result of a process whereby the individual's psyche, motivation, or inherent abilities are allowed or encouraged to flourish in spite of adversity. There are three major theoretical strands that derive from the psychological perspective: resilience, entity, and motivational theories.

Explaining (Latino) High Achievement: Theoretical Perspectives

Viewed As →

Addressed By →

Representative Research →

	Psychological / *Intrapersonal*			Sociological / *Extrapersonal*		Anthropological / *Socio-cultural*	Educational / *Systems*

Psychological / *Intrapersonal*

- **Resilience** → Youth development, e.g., mentoring → Resilience Literature: Garmezy, 1991; Benard, 2004; Werner & Smith, 1982
- **Entity "trait"** → "Discovering it" through assessment → Identification Literature: Gardner, 1993; Sternberg, 1989; assessment literature
- **Motivational "state"** Self-concept → Parenting interventions, changing attributions → Motivation Literature: Dweck, 2000; Gándara, 1995; McClelland, 1965; Urdan & Maehr, 1995

Sociological / *Extrapersonal*

- **"soft" Social Networks** → Social Capital creation → Social Capital Literature: Mehan, 1996; Portes & Zhou, 1993; Rumbaut, 1995; Stanton-Salazar, 2001
- **"hard" Social Structures** → Political Interventions → Socio-political Literature: Bowen & Bok, 1998; Cummins, 1986

Anthropological / *Socio-cultural*

- **Culturally Defined** → "Bridging Multiple Worlds" → Socio-cultural Literature: Cooper et al., 1995; Gibson, Suarez-Orozco, 1996; Phelan et al., 1996; Steele, 1996

Educational / *Systems*

- **Access to Institutional Resources** →
  - School-centered Interventions: School - Curricular Reform → Reform Literature: Comer, 1998; Oakes & Wells 1998; Renzulli & Reis, 2000
  - Student-centered Interventions: Creating Pathways & Support Systems → Program Intervention Literature: Adelman, 1999; Gándara & Bial, 2001; Perna & Swail, 1998
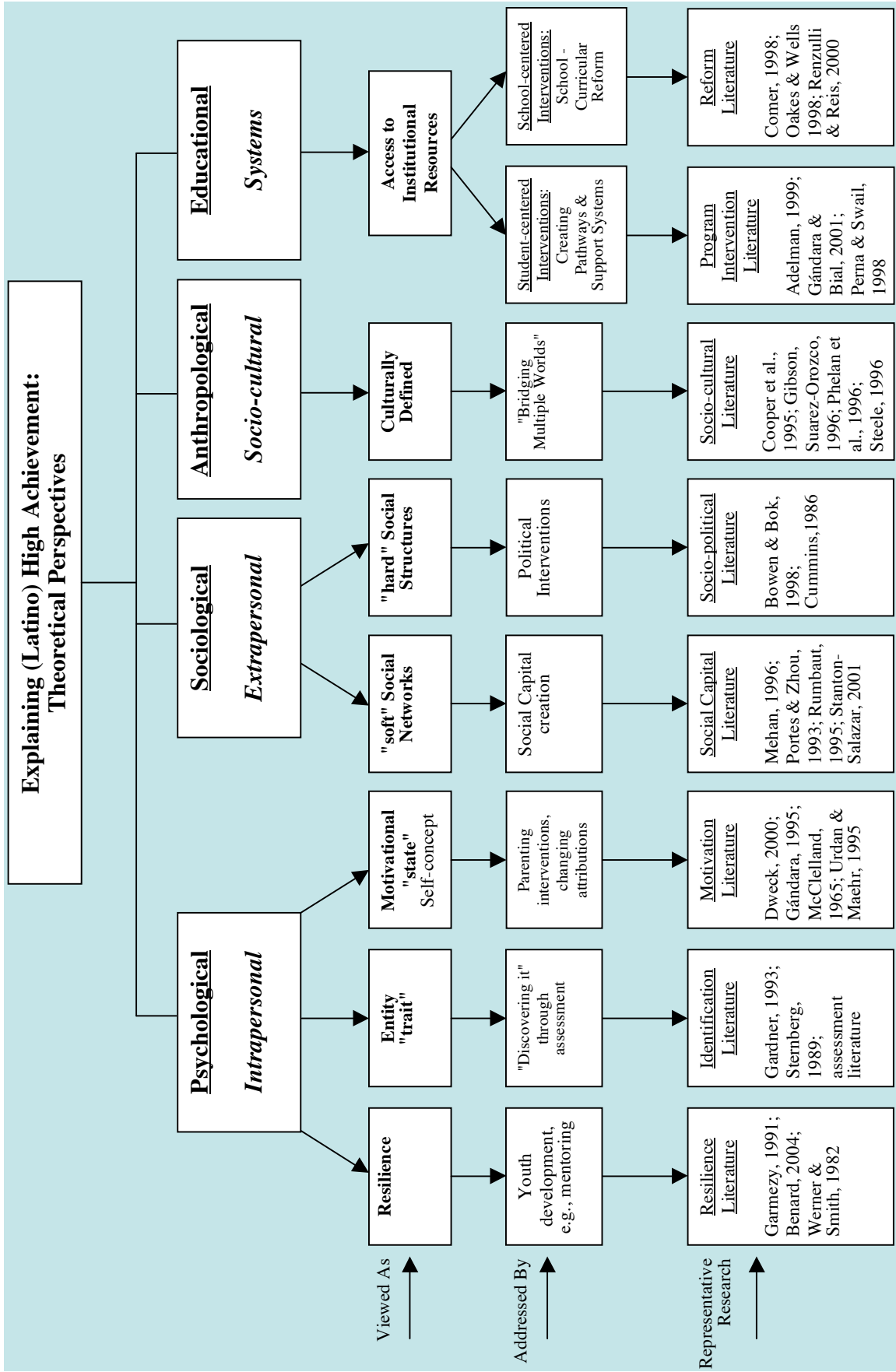
Figure 1. Explaining (Latino) high achievement: Theoretical perspectives.

Box: Resilience

Benard, B. (2004). *Resiliency: What we have learned.* San Francisco: WestEd.

Garmezy, N. (1991). Resilience and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34,* 416-430.

Werner, E., & Smith, R. (1982). *Vulnerable but invincible: A longitudinal study of resilient children and youth.* New York: McGraw-Hill.

Box: Identification

Gardner, H. (1993). *Multiple Intelligences: The theory in practice.* New York: Basic Books.

Sternberg, R. J. (1989). *The Triarchic mind: A new theory of human intelligence.* New York: Penguin.

Box: Motivation

Dweck, C. (2000). *Self-theories: Their role in motivation, personality, and development.* Philadelphia: Taylor and Francis.

Gándara, P. (1995). *Over the ivy walls: The educational mobility of low income Chicanos.* Albany, NY: State University of New York Press.

McClelland, D. (1965). Toward a theory of motive acquisition. *American Psychologist, 20,* 321-333.

Urdan, T., & Maehr, M. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research, 65,* 213-243.

Box: Social Capital

Mehan, H., Villanueva, I., Hubbard, L., & Lintz, A. (1996). *Constructing school success: The consequences of untracking low-achieving students.* New York: Cambridge University Press.

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Sciences, 530,* 74-96.

Rumbaut, R. (1995). The new Californians: Comparative research findings on the educational progress of immigrant students. In R. Rumbaut & W. A. Cornelius (Eds.), *California's immigrant children, theory, research, and implications for educational policy* (pp. 71-90). San Diego, CA: University of California Center for U.S.-Mexican Studies.

Stanton-Salazar, R. (2001). *Manufacturing hope and despair: The school and kin support networks of U.S. Mexican youth.* New York: Teachers College Press.

Box: Socio-political

Bowen, W., & Bok, D. (1998). *The shape of the river: The long term consequences of considering race in college and university admissions.* Princeton, NJ: Princeton University Press.

Cummins, J. (1986). Empowering minority students: A framework for intervention. *Harvard Educational Review, 56,* 18-36.

Box: Socio-cultural

Cooper, C., Jackson, J., Azmitia, M., Lopez, E., & Dunbar, N. (1995). Bridging students' multiple worlds: African American and Latino youth in academic outreach programs. In R. Macias & R. Garcia Ramos (Eds.), *Changing schools for changing students: An anthology of research on language minorities* (pp. 111-234). Santa Barbara, CA: University of California Linguistic Minority Research Institute.

Fordham, S., & Ogbu, J. (1986). Black students' school success: Coping with the burden of "acting White." *Urban Review, 18,* 176-206.

Gibson, M. (1988). *Accommodation without assimilation: Sikh immigrants in an American high school.* Ithaca, NY: Cornell University Press.

Suárez-Orozco, M., & Suárez-Orozco, C. (1996). *Trans-formations: Migration, family life, and achievement motivation among Latino adolescents.* Stanford, CA: Stanford University Press.

Phelan, P., Davidson, A., & Yu, H. C. (1996). *Adolescents' worlds: Negotiating family, peers, and school.* New York: Teachers College Press.

Box: Program Intervention

Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

Gándara, P., & Bial, D. (2001). *Paving the way to postsecondary education: K-12 intervention programs for underrepresented youth.* Washington, DC: National Center for Education Statistics. Available at www.ed.gov/nces

Perna, L., & Swail, W. S. (1998, November). *Early intervention programs: How effective are they at increasing access to college?* Paper presented at the annual meeting of the Association for the Study of Higher Education, Miami, FL.

Box: Reform Literature

Comer, J. (1988). Educating poor minority children. *Scientific American, 259,* 42-48.

Oakes, J., & Wells, A. S. (1998). Detracking for high student achievement. *Educational Leadership, 55,* 38-41.

Renzulli, J. S., & Reis, S. M. (2000). *What is Schoolwide Enrichment? And how do gifted programs relate to total school improvement?* Available online at www.gifted.uconn.edu/sem/whatisem.html

Resilience Theory

Resilience theory has the potential to help explain the phenomenon of high achievement among Latinos in spite of adversity by borrowing from the findings of research on at-risk youth who survive both psychological and biological threats to their well-being and yet develop into physically and psychologically healthy adults. The roots of this theoretical perspective are in the early work of Garmezy and his colleagues (Garmezy, 1976, 1991; Garmezy, Masten, & Tellegen, 1984) who investigated what was initially referred to as "invulnerability" but later developed into the study of competence and resilience. Garmezy was particularly interested in children raised by schizophrenic mothers who managed to develop normally in spite of their chaotic upbringing. However, he began to turn his attention to a more generalized competence, including the development of achievement motivation. In reflecting on more than a decade of work on high risk and vulnerable children, Garmezy (1971) noted,

> [W]e have come across another group of children whose prognosis could be viewed as unfavorable on the basis of familial or ecological factors, but who upset our prediction tables and in childhood bear the visible indices that are hallmarks of competence: good peer relations, academic achievement, commitment to education, and to purposive life goals, early and successful work histories. . . . Were we to study the forces that move such children to survival and to adaptation, the long benefits to our society might be far more significant than our many efforts to construct models of primary prevention designed to curtail the incidence of vulnerability. (p. 114)

Among the chief findings of this research was that these "resilient" children had at least one psychologically healthy adult in their lives and they also had a basic social and intellectual competence that appeared to make them less vulnerable to psychological stressors.

Masten extended this early work with Garmezy to include a broader focus on an array of childhood stressors, and shifted away from the model of psychopathology to focus on resilience as an aspect of *normal* development (Masten, 1994; Masten & Coatsworth, 1998). In 1955, Werner and Smith set out to study the long term outcomes for children who experienced prenatal and perinatal stress and who were reared in adverse (poverty, family instability) circumstances (Werner & Smith, 1982). By the end of their 40-year study, they found that only about one in six of the children who had entered the world under adverse conditions actually succumbed to their circumstances (Werner & Smith, 2001). Most experienced what the researchers came to view as a normal developmental "self-righting" process, which was aided by certain specific protective factors. Among these protective factors were a temperamental predisposition to be open to the help and guidance of others, opportunities to develop a sense of competence and self esteem, and caring and supportive adults in their lives (Werner, 1992; Werner & Smith, 2001).

The shift from an early focus on "invulnerability" to "resilience" appears to have come about as researchers came to view the phenomenon not so much as an individual's imperviousness to the challenges placed before him or her, but rather an ability to withstand and even thrive in spite of the impact and effects of these circumstances. Individuals who survived such backgrounds were not, in fact, invulnerable; they were simply resilient in the face of the "slings and arrows of outrageous fortune"—they bounced back. Contemporary resilience theorists tend to emphasize that resilience is not a "trait" that some individuals have, but a "state" that can be nurtured and supported and that is evident in some contexts and not in others. That is, an individual may demonstrate resiliency in the face of certain kinds of challenges, but not necessarily in others. And much depends on the resources and support he/she receives (Benard, 1996). Horn and Chen (1998) looked at resilience in at-risk students who make it to college, based on the National Educational Longitudinal Study (NELS) of 1988. At-risk status was measured as having two or more of the following risk factors: low socio-economic status, sibling who dropped out of school, single parent home, low grades, held back a grade, or changed schools. Horn and Chen concluded that parental involvement, in the form of school-related discussion while in high school, was an important protective factor that significantly increased students' likelihood of going on to college.

The field of Youth Development has adopted the resilience model in attempting to address the needs of young people at risk for both behavioral and academic problems. Big Brothers/Big Sisters is one of the most well known and successful of these efforts. The core of their intervention is the provision of a mentor for children at risk due to poverty and absence of a parent. Findings are mixed with respect to the ability of a mentor to change the academic trajectory (and thereby have a significant impact in creating high achievement) of young people at risk, but there is good evidence that mentors can affect behavioral outcomes for at-risk youth (Gándara & Mejorado, 2004; Grossman & Tierney, 1998). Benard (1996) has focused her attention on the ways that schools can foster resilience in at-risk students by emphasizing a "strengths perspective." She argues that schools that focus on students' strengths rather than their deficits, that provide opportunities to develop self-efficacy, and that exhibit caring and nurturance can play active roles in producing students with resilient outcomes. Similarly, Renzulli and Reis (2000) have also described how their Schoolwide Enrichment Model (SEM) can foster students' strengths in ways that support resilience by considering three domains— the types of skills and abilities that a child has, the types of services that can be provided to support the development of those abilities, and the kinds of performances that can demonstrate learning outcomes. Schools that serve Latino students and that are organized to provide such thoughtful and tailored curricula, support, and nurturing could be expected to produce more high achieving Latinos.

An important feature of resilience theory is that it is based on a universalist notion that certain developmental principles hold for all children, and thus interventions can and should be equally effective for all children, regardless of gender, background, race, or ethnicity. However, the evidence on programmatic interventions does not necessarily bear this out. In a review of programs designed to increase college access for underrepresented students, Gándara, and Bial (2001) found that programs differed in their

ability to effect successful outcomes for youth according to background characteristics of the students. Some programs were more effective with some ethnic or racial groups than others and this appeared to be related to the cultural backgrounds, knowledge, and experience of the staff. Some proponents of the Youth Development movement have focused efforts on raising the academic achievement of minority youth specifically and sought to identify programs that demonstrate particular success with African American, Native American, and Latino students (James, Jurich, & Estes, 2001). Thus, the development of resilience in youth may depend to some extent on the nature of the supportive mechanisms provided and the degree to which they are culturally aligned with the young person's life circumstances.

Entity Theory

Entity theorists generally subscribe to the notion that high achievement is the product of high ability and that it can be found in the midst of adversity as well as in affluence. Thus the central challenge of the entity theorists is to identify the characteristics of high ability in children who may not demonstrate it in the same ways as others because of cultural, linguistic, or other differences. Entity theorists would argue that Latino high achievement is often masked by cultural practices and that culturally biased measurement simply fails to uncover the existence of this ability or set of competencies. Undiscovered, these abilities go unnurtured and unacknowledged, and may, in fact, convert into social deviance because of boredom and disaffection with a mind-numbing curriculum that is not matched to the talents of the child (Galbraith, 1985). For the entity theorists, the problem of Latino underachievement is based in the failure to *identify* high ability accurately in this population. Hence, much of the research has focused on issues of identification and measurement of high ability in low income and minority children.

During the 1970s, Jane Mercer (1979) led a movement to develop racially non-discriminatory measurement of intelligence in order to increase the chances of "discovering" high ability in children for whom it might be masked by conditions of poverty, disability, and cultural difference. Her System of Multicultural Pluralistic Assessment (SOMPA) gained some adherents but ultimately floundered because it did not have the predictive ability of more standard forms of measurement. Other efforts at developing "culture free" and "culture fair" assessments have received a cool reception from the field, in part because they often fail to yield any better results for children of color than do the traditional measurements (Anastasi, 1988).

The whole area of gifted education has traditionally relied to a large extent on entity theory, in that it has been predicated on a belief that highly talented youngsters need to be identified early and provided with appropriate curriculum and instruction. Otherwise, the argument goes, their potential will be untapped, and they may even turn away from school out of boredom and frustration (Galbraith, 1985).

Howard Gardner's (1993) theory of multiple intelligences has resonated with the field of psychology and created the intellectual space to envision culturally different

children as equally capable as their mainstream peers, but in different ways. This work has spun off teacher workshops and numerous publications geared toward helping school personnel to foster the multiple abilities of students, but has not yet yielded much in the way of uncovering many Latino candidates for high achievement. A number of programs reviewed in Callahan, Tomlinson, and Pizzat (1994) provide potential models for identification and assessment of young minority children that are designed to be both culturally sensitive and innovative. The Full Potential Program for African American students described by Amuleru-Marshall, Mumford-Glover, and Jones (1994) incorporates a series of rating scales for teachers, parents, and peers combined with student portfolios and is used with children beginning in the first grade. While no psychometric properties are reported for the scales, the overall battery of diagnostic instruments appears to correlate reasonably highly with the Iowa Tests of Basic Skills, while effectively increasing the numbers of African American students identified by 18 to 22%. The STEMS program, reported on by Pizzat (1994) focuses on training teachers to identify special talents in children who may be gifted. Task commitment, risk taking, and independence are some of the characteristics teachers are trained to recognize, as well rich verbal expression and use of imagery. Exceptional abilities in arts, athletics, and creative communication are also a focus of the program. However, there is relatively little attention in the literature to assessment programs that are particularly sensitive to cultural differences for Latino students, and as Burstein and Cabello (1989) note, teachers appear to have particular difficulty in identifying potentially high achieving (or gifted) Latinos. Frasier, García, and Passow (1995) reviewed existing literature on assessment issues associated with identifying giftedness in minority students and concluded that an important reason that the field continues to struggle with problems of identification is that the construct of giftedness is poorly defined. Thus, while entity theory has the potential to help explain Latino high achievement, the field has not developed to a point where it has been very successful in doing so, largely because of the limitations of measurement.

Achievement Motivation Theory

There is probably more research into motivation than any other area of psychology. Psychologists have long been fascinated by the drive that seems to impel some individuals to heights of achievement, while others appear to be felled by life's most trivial impediments. Most of this research, however, ignores the possibility of cultural and ethnic differences in the forces that shape achievement motivation. Nonetheless, some of this research does have direct application to an examination of achievement motivation for Latino populations. McClelland, Atkinson, and their colleagues (Atkinson & Feather, 1966; McClelland, 1965; McClelland, Atkinson, Clark, & Lowell, 1953) argued that parenting practices were related to high need to achieve (NAch) in school and otherwise. They proposed that motivation for achievement could be engendered in children through early training by setting high standards and providing sufficient independence and autonomy for the child to develop a sense of task mastery. A similar line of research was followed by Baumrind (1989) and others (e.g., Steinberg, 1996) who have argued that particular parenting practices are associated with academically ambitious students. The three types of parenting practices mentioned repeatedly in the literature are: authoritarian—in which parents are often distant,

controlling and offer few opportunities for autonomous behavior; authoritative—in which parents are warm, firm, but allow children sufficient autonomy to make choices; and permissive—in which parents allow excessive autonomy without firm guidance. Authoritative parenting has consistently been found to be associated with higher academic achievement in children (Baumrind, 1989; Steinberg, 1996). This type of parenting, not surprisingly, is found most frequently in middle class and Anglo American households, while African American, Latino, and other immigrant groups are more likely to be authoritarian. Laosa (1978) showed that Mexican origin mothers from lower income backgrounds were indeed less likely than White middle class mothers to foster autonomous behavior and independent problem solving in their children. And, as their children tended to be less successful in school, this research seemed to confirm the importance of fostering self-efficacy and task mastery as a prelude to formal schooling.

Some have argued, however, that the association between authoritative parenting and middle and upper class status may be more than coincidence. While relatively benign social environments may lend themselves to this type of parenting, quite possibly a stricter, less flexible parenting style may be called for in less benign environments where a single bad choice can lead to irreversible consequences. Both Clark (1983), investigating the antecedents to high achievement among low income African American youth, and Gándara, (1995), studying similarly successful low income Mexican Americans, concluded that many of their high achievers were reared in authoritarian households. Strict parents with strong goals for their children often kept them out of harm's way by limiting their autonomy and insisting on adherence to non-negotiable rules. While such parenting may not have prepared the children well for interactions with middle class peers and teachers, it kept them on a straight and narrow path—"the buen camino"—during risky points in their young lives and allowed them to flourish in school. This research calls into question the universality of a single type of parenting for academic excellence across cultural circumstances, and begs the question of whether the field of psychology has paid sufficient attention to the socio-cultural context in which achievement is nurtured.

Earlier motivation theorists gave little consideration to the possibility that socio-cultural differences could shape the definition or expression of achievement motivation. However, Maehr (1974), building on the work of McClelland and Atkinson, argued that motivation to achieve was not a "trait" found in some individuals, nor was it exclusive to particular cultural groups, but that its expression was highly dependent on context, and that culture formed one of those primary contexts. In later work, Urdan and Maehr (1995) proposed that motivation to achieve could also be a function of social goals, and that one could be motivated to achieve not just for the self, but also for the group. Such broader notions of achievement motivation are more useful in trying to explain high achievement among collectivist groups, such as some Latinos, where individuals may be rewarded more for pursuing familial, rather than personal goals (Grebler, Moore, & Guzmán, 1970).

Closely related to the concept of achievement motivation is *aspirations*. Aspirations are the manifestation of one's need to achieve or achievement motive. They

are the goals that individuals set for themselves. A number of studies have shown that Latino youth as a group tend to have lower aspirations than other ethnic groups. For example, Latinos tend to report less ambition to go to college than other ethnic groups (Gándara et al., 2004; Kao & Tienda, 1998; Steinberg, 1996). This is sometimes attributed to realistic assessments of their likelihood of achieving the goal of a college education (Kao & Tienda, 1998), and at other times viewed as a result of the social and peer contexts in which these goals are formed (Gándara et al., 2004). It has been pointed out by a number of researchers that it is difficult to form high achievement goals in the absence of a supportive network of school, family, and friends who hold similar goals (Steinberg, 1996; Steinberg, Dornbusch, & Brown, 1992).

Some Latinos from low socio-economic backgrounds, however, do form high educational goals, and self reports of the sources of their motivation include prominently the influence of mothers, but also other significant "mentors" in their lives (Arellano & Padilla, 1996; Gándara, 1995). Gándara (1995) also found that Mexican origin parents of high achievers sometimes used very cultural-specific strategies for increasing the aspirations of their children. She has shown that a strategy of telling stories of family exploits or status in prior times (whether or not they are true) is often used to inspire and instill hopefulness in young Latinos who do not see models of high achievement in their immediate environment. Gándara (1995) also found evidence of an abundance of early literacy practices in the homes of these high achievers, even though parents typically had low levels of formal education. Reading and studying the bible and engaging children in conversations about civil rights and social justice issues were ways that many parents of high achievers inspired their children to aim high and do well in school to be able to meet their own and their parents' expectations.

Self-concept and perceptions of one's own ability figure importantly into the motivation to achieve and the development of aspirations. Dweck (2000) has found that ability concepts are developmental in nature and that as children get older, they have a greater tendency to see ability to be fixed (a trait) and to judge themselves increasingly harshly with regard to their own ability. By 7-8 years of age, social comparisons (how smart one perceives oneself to be compared to others) and academic outcomes (e.g., grades, test scores, teacher feedback) affect students' ability estimates, but have relatively little impact on their motivation. However, by 10-12 years of age, both social comparison and academic outcomes have a substantial impact on self-evaluation and motivation (Dweck, 2000; Heyman & Dweck, 1998). The implications of these findings are significant for explaining Latino children's achievement. Because Latino children typically fare much more poorly in school than either their White or Asian classmates, both academic outcomes and social comparisons converge to dampen motivation for high achievement. For example, when one Latino middle-schooler was asked to assess where he stood with respect to his classmates in a particular class: "Are you in the top 10 percent of your class?" The young Latino looked incredulous and retorted, "I can't possibly be, there are more than 3 Asians in my class [of 30 students]!"

Stevenson and Stigler (1994), studying perceptions of ability and effort in American, Japanese, and Chinese students and their mothers, concluded that Americans

tend to hold a strong entity view of ability—that it is a relatively unalterable trait—while Asians viewed academic outcomes to be the product of effort rather than any immutable ability trait. They also found that American mothers were more satisfied with their children's academic outcomes, even when they were relatively mediocre, while Asian mothers tended to feel that their children could always improve "with a little more effort." If Stevenson and Stigler are correct, then the American tendency to downplay the role of effort in academic outcomes is culturally transmitted and forms an important part of the cultural ethos into which Latino children as well are assimilated.

Latino students who excel academically must view themselves as intellectually competent when compared to their classmates and must receive sufficiently positive feedback about their academic performance to sustain high self-concepts of ability, and they must accomplish this in the context of a culture that tends to see academic outcomes as more the product of fixed ability than a willingness to expend effort to excel. This is a tall order for any student; it is especially so for students who carry the stigma of coming from a group for which achievement is chronically low.

Sociological Perspectives

Under the rubric of sociological perspectives there are two significant theoretical strands of research that can help to explain Latino high achievement. A cornerstone of sociological research is status attainment theory, which explains the mechanism by which social reproduction occurs. Essentially, status attainment theory posits that privileged groups in society pass on their status to their progeny by controlling access to power and structuring opportunities in ways that advantage their class. We divide these structural explanations into two categories: (a) "soft" social networks, and (b) "hard" social structures. The distinction between soft and hard structures refers to some extent to their permeability, but also to the amount of political "force" or intervention that is required to change them. Soft social networks are the web of social relations—and the access to power and authority that they represent—which generally differ substantially by social and economic status. The hard social structures refer to the entrenched practices and policies that more directly admit some groups and exclude others from privilege of all kinds in society. It is important to reiterate here also that sociological theories differ fundamentally from psychological theories in that they attempt to explain behavior for groups as opposed to individuals, and so methods for effecting change are also directed at group phenomena rather than characteristics or assumed of individuals.

"Soft" Social Networks

Bourdieu and Passeron (1977) and Coleman (1988) are most closely associated in contemporary sociological writings with the theory of "social capital" as an explanation for how the middle and upper classes very effectively maintain social privilege for their members. Social capital is the wealth of important human relationships and information about how to make the social system work to one's group's advantage. An important example of this was demonstrated in the work of Lareau (1987), in which she showed the different ways that affluent parents were capable of extracting far more benefit for their

children from the same schools than were low income parents. Affluent parents, with their knowledge of how the system worked at the level of decision makers and their easy access and comfort with persons of authority, allowed them to influence important educational decisions on behalf of their children, gaining them access to better curricula and more effective teachers. Not only could they affect the decisions, but they felt an entitlement to do so. It becomes clear through the work of these writers why so many Latino students are disadvantaged in their school settings. But it is the work of other sociologists, such as Mehan and his colleagues (1996), Stanton-Salazar (2004), and Portes and Zhou (1993), that explicates the ways in which social networks can also *advantage* some Latinos and lead to high achievement.

Mehan et al. (1996), in a study of low income and minority high school youth in a college preparation program, described the ways in which this largely Latino group of students was able to support each other's aspirations for high achievement, even in the face of a peer culture that was not very approving of their dedication to schooling. Mehan and his colleagues argued that in structuring these mutually supportive peer groups, the program had created a social safety net for the students. Within the peer groups, students were able to share both encouragement and information that kept them on track academically and headed for college. Stanton-Salazar (1997) refers to this as creating social capital and argues that even marginalized Latino youth can create capital rich micro-environments. In her study of high achieving Chicanos, Gándara (1995), too, found evidence of students providing the information and support for each other that they did not receive from teachers or counselors. One young woman recalled how she was in the line to register for classes and did not know she was in the vocational track line, but also did not believe she belonged in college preparatory classes. A friend called her out of line with the admonition, "Don't stand in that line because you will learn the same stuff you learned in seventh and eighth grade, just reviewing the same stuff," and so her friend steered her into the college prep line in spite of her protestations that she didn't "belong there." This highly achieving Latina student attributed the fact that she went on to college and ultimately earned a Ph.D. to this one fateful day and the friend who encouraged her to take the college prep classes.

Portes and Zhou (1993) argue for what they call "segmented assimilation." The vast differences among Latino groups with respect to academic achievement—Cuban Americans often outperform White middle class students, while Mexican origin and Puerto Rican students are at extremely high risk for school failure—they aver is due to the capital rich and capital poor environments into which these youth are assimilated. They point out that Cubans, with a strong economic foothold in the United States, are able to provide considerable social capital for their co-ethnic peers, while Mexican and Puerto Rican parents, with little social or economic capital in their communities, are severely challenged in attempting to orient their children toward high achievement goals. Few role models of achievement exist, and there is little access to networks of power brokers in the larger community. But even within such capital poor environments, it is possible to create social capital for students.

Jaime Escalante, the famed math teacher from East Los Angeles whose students, virtually all of whom were Latino, outperformed children of privilege across the nation in passing AP calculus exams, was a source of enormous social capital for his students. And he taught them how to share that capital among themselves. Escalante daily imbued his students with "life lessons" in addition to teaching calculus. He urged them to aim high and told them they would all go to college. He brought the students into contact with experts in every field that used mathematics and paired them with former students who were succeeding in college and in their careers. The Escalante students hung out together in his classroom before and after school and during lunch. They created their own oasis of social capital and nurtured each other's ambitions.[4] Many of Escalante's Latino students have gone on to become very high achievers.

Another important example of the creation of social capital in socially and economically disadvantaged Latino communities is found in the work of González et al. (1995). In this ongoing work, the researchers have designed strategies for bringing the skills and talents found in the communities of low income Latino students into the classroom. Parents are invited to share their skills with children, acting as experts in particular areas of the curriculum, such as the use of mathematics concepts in building and sewing. The approach is known as Funds of Knowledge and the intent is to help Latino students see the intellectual strengths in their own homes and communities and to increase the credibility of parents as sources of knowledge. It also effectively builds social capital as community members become part of the resources in the school. The researchers conclude that students become more engaged in their learning, but more importantly, that teachers also come to see Latino families as more intellectually competent as a result of these pedagogical practices.

"Hard" Social Structures

The other way in which sociological theory can help explain high achievement in Latino students is through challenges to the deeply imbedded "hard" social structures that often exclude them from opportunity. Seldom does a society create such pervasive changes in the distribution of resources or opportunities that they have an identifiable impact on the disenfranchised. In fact, this is why we have referred to these as "hard" structures. Affirmative action, however, is one such challenge to the social reproduction of power and privilege. While relatively few students of color have actually benefited directly from affirmative action, there is evidence that, as a strategy, it has played a role in raising the achievement of some minority youth—including Latinos. William Bowen and Derek Bok (1998) studied the long term outcomes of minority (mostly African American) students who were the beneficiaries of affirmative action practices in admission to elite universities. They found that the more selective the college or university that these students attended, the more likely they were to complete their studies, graduate, and go on to graduate school. By a number of measures, they were also more personally and financially successful than co-ethnic peers who attended less selective institutions. There are several explanations for the greater success that minority

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[4] I spent 4 years in Mr. Escalante's classroom in the early 1990s, observed classes, interviewed and surveyed students, and spent many hours in conversation with Mr. Escalante about his practice.

students experience in elite schools. These schools have a higher overall graduation rate than almost all other institutions of higher education because their operating assumption is that if a student survives the extremely rigorous admission process, he or she is fully capable of obtaining a degree. Most public institutions, and other less selective colleges, on the other hand, assume that the graduating class will be substantially smaller than the freshman class because not all students admitted can be expected to complete their degrees (Klitgaard, 1985). Both social and academic support, as well as social and academic pressure, no doubt also contribute to the high success rate, as success is the *expected* outcome. It is unfortunate that Bowen and Bok did not conduct their analyses on a Latino sample, but there is every reason to believe that such findings would be consistent for Latinos as well as for Black students.

Bilingual education is a structural intervention that has been particularly targeted to the Latino community, given that up to half of Latino students begin school as English learners (Rumberger & Gándara, 2000). However, like affirmative action, it has been highly politicized, characterized as an "unfair" ("*my* grandfather came to this country, learned the language, and became successful without bilingual education") and costly[5] intervention. While the most definitive research on bilingual education concludes that, when well-implemented, it holds a small advantage in long term educational outcomes over other instructional methods (August & Hakuta, 1997), it continues to be the focus of intense political debate, most recently culminating in a series of voter initiatives in California, Arizona, and Massachusetts that prohibited or severely limited its use for students with limited English proficiency. Why should a pedagogical strategy be the target of such broad political concern? Some commentators note its powerful symbolic value as a political concession to a growing—and not universally welcome—minority group (Crawford, 2000). Cummins (1986) describes bilingual education as a strategy for empowering Latino students by providing them with linguistic and political legitimacy. There can be little doubt, however, that bilingual education, with its objective of channeling educational resources to one group (English learners), is perceived by many as fundamentally a political, rather than a pedagogical, tool for the advancement of Latino students. Nonetheless, in a recent review of the extant literature on language assistance programs, Gándara (1999) found that the highest achievement gains were posted by students in dual immersion (simultaneous instruction in literacy in two languages) programs. This instructional approach appears to hold the greatest promise for high achievement for both native English speakers and English learners, as the cognitive benefits of multilingualism (cf. August & Hakuta, 1997) are best realized in programs that focus on high levels of biliteracy.

Anthropological Perspectives

The primary investigative methodology of anthropology is ethnography, and one of its major contributions has been the study and illumination of socio-cultural context as

[5] Two major studies have been conducted that address the issue of the cost of bilingual education (Carpenter-Huffman & Samulon, 1981; Parrish, 1994). Both concluded that bilingual education was among the most cost effective approaches for the education of English learners; nonetheless, the issue of cost continues to be raised as a red herring in debates about bilingual education.

a key variable in shaping attitudes, beliefs, and behaviors. Socio-cultural theory helps to explain Latino high achievement by unearthing the processes by which some Latino students are able to adapt, accommodate, bridge multiple cultures, and not only survive in "alien" environments, but excel in them. There has been a plethora of socio-cultural research in the last couple decades that sheds light on this issue.

Margaret Gibson (1988) conducted an ethnographic study of the school and cultural adaptation of Sikh immigrant youth in a rural community in Northern California. She sought to understand, from the perspective of the high school students and their families, how they were able to excel in school in spite of cultural differences and language handicaps. Gibson concluded that these students had "accommodated" to the demands of the school very well, but they had not assimilated to the American culture. By maintaining strong cultural ties, they also maintained an intact identity and a strong support system in the community. Unlike other immigrants that too quickly assimilate, they had maintained close ties to elders and family who supported these young people's aspirations without fear that they would turn their backs on the community. Rumbaut (1995) finds similar patterns across "successful" immigrant students in California. Based on data from the San Diego schools, he concluded that those immigrant students—whether Mexican or Asian—who maintained closer ties to their native culture and language were more likely to be successful in school. He explained this phenomenon as an example of the way in which family culture can be a "protective factor" for youth, reminiscent of the resiliency research. Similarly, Suarez-Orozco and Suarez-Orozco (1996), in a psycho-anthropological study comparing Mexican immigrant, second generation Mexican origin, and Anglo-American students, concluded that Americanization was bad for students—the more the Mexican students became estranged from traditional culture, the less motivated they were to achieve. On the other hand, Mexican immigrant students tended to work hard in school to please their parents, and they took pride in excelling. Second generation Mexican students, like the White students, only considered whether working hard in school would please themselves. Too often they concluded that it did not.

A growing body of literature has focused on the ability of some students to effectively "bridge multiple worlds" (Cooper, Jackson, Azmitia, Lopez, & Dunbar, 1995). Phelan, Davidson, and Yu (1997) argue that minority students can be typed according to their skill at "border crossing" and that students who learn to navigate across cultural boundaries are more likely to achieve success in school. Mehan et al. (1996) observed this phenomenon among their Advancement Via Individual Determination (AVID) students, arguing that highly competent Latino and African American students typically had multiple reference groups and socialized with both low achieving "homeboys" and "homegirls" as well as higher achieving peers in school. Gándara (1995), too, found this a common feature of her high achieving Latino sample. These high achievers had a skill for maintaining good social relations with both low and high achievers, and their willingness and ability to move agilely across peer groups allowed them to avoid the stigma some high achievers suffer for "acting White" (Fordham & Ogbu, 1986) or being a teacher's pet. For example, one young woman in Gándara's study noted:

[W]e were about six, seven girls . . . like a clique. But none of them went to college . . . and actually a lot of people say that bright kids were made fun of and all that, but in my case, it wasn't the case. It was the opposite. They would look up . . . and say, "She's so smart," and "She's a brain," and like that. But in a nice way, you know. (p. 75)

Gándara concluded that the students who were supported by their peers for high achievement were those who did not turn their backs on the lower achievers or seek to disassociate themselves from co-ethnic peers. Some helped the lower achievers with their homework, others made a point of joining in activities with these lower achieving students, and sometimes making excuses to leave a party early to go study. However, this "border crossing" ability was key to allowing these Latino students to simultaneously gain access to the social capital of their mainstream, usually White and high achieving peers, at that same time that they were able to nurture their identity as Latinos among students like themselves in background and circumstances, if not in aspirations.

Educational Systems Perspectives

The fourth and final theoretical perspective is a hybrid model that takes into account the literature in school reform and the social organization of schooling. From this somewhat eclectic vantage point, one can discern two major strands of thinking about the ways in which Latinos can emerge as high achievers in school. As is typical in the education literature, these perspectives are more theories of action than merely explanatory frameworks that seek only to describe the phenomenon of Latino high achievement in the face of adversity. However, there is a clear relationship to the more theoretical literature on forms of capital, in this case educational capital, which we believe can result from the intervention of school systems in the lives of students. The divisions here are not unlike the divisions between psychology and sociology, with the former focusing on explanations at the level of the individual and the latter emphasizing group processes. The first theoretical perspective under this rubric is the student-centered approach. From this perspective, Latino high achievement can result from intervention in the lives of individual students with very specific and targeted instruction and guidance. Such support is often programmatic in nature and adults are assigned to work with individual students to maximize their potential. The second theoretical strand is the school-centered approach. From this perspective, Latino high achievement can be seen as the product of fundamentally reformed schooling conditions and practices in which these students are viewed as assets rather than as a resource drain on the system.

Student-centered Educational Interventions

The intransigent achievement gap between Latinos (and African Americans and Native Americans) on the one hand, and White and Asian students on the other, has led some researchers to try to understand the potential of student-centered programs in producing high achievement in Latinos and other disadvantaged students. Student-centered programs include the panoply of programs and activities that target specific students for intervention to raise their achievement, reduce drop out rates, and often to go

on to college. Some of these activities involve ancillary school services, such as counselors and psychologists, but these are rarely targeted to high achievement goals. More often these kinds of services are focused on prevention efforts. Most intervention programs in the schools focus on narrowing the education gap for low income and ethnic minority students, and most are focused on students at risk of school failure. Some programs, however, and these are usually referred to as college access programs, may attempt to stimulate high achievement, and therefore may include a less at-risk population. Students in these kinds of programs are often those who demonstrate high potential, but who may not complete high school or go on to college because of risks in their environment (e.g., poverty, low parental education, inadequate schools). Among these are programs such as Prep for Prep, I Have a Dream, AVID, and Puente.

A critical strategy that almost all of these programs use is to remove students from either dead-end curricular tracks or dead-end schools and put them into new settings where the educational rigor and support are increased. This typically involves students in secondary schools who already have a lengthy school history and often have significant deficits in their learning, if not in their achievement. Ambitious students in low income schools often earn A's for work that would not qualify for a C in more affluent schools (Educational Trust Incorporated, 2001). The "theory of action" behind this strategy is that capable young people will be able to flourish intellectually and academically if provided the appropriate curriculum and support to access that curriculum. Often students who have been in low-end courses are not prepared initially to tackle both a rigorous curriculum and the strong competition posed by fellow students who come to school well prepared and socially and economically advantaged. In this sense, the effectiveness of such programs also depends on their ability to support students socially and emotionally as they transition into these new environments. Puente is one of the only programs that actually focuses specifically on Latino students, though many of the others have a largely Latino clientele, depending on where they are located.

There is consistent evidence that well-implemented programs of this type can significantly raise the aspirations and the educational outcomes of students who otherwise may not have completed school or gone on to college (Gándara & Bial, 2001; Horn & Chen, 1998). Typically, these programs meet a goal of doubling college-going rates (compared to other similar students), but there is little evidence that they actually raise measured achievement (grades, test scores) significantly. Very rigorous programs like Prep for Prep, which places students from low income neighborhoods into elite college preparatory schools, *may* be able to effect these changes, but there are no existing data to demonstrate this. The absence of data to show large gains in measured academic achievement raises the issue once again of the definition of constructs. Is a high achieving Latino student one who goes on to a 4-year college and successfully graduates from that institution or is she a student who scores high on SAT exams, gets good grades, and is focused on a career in science? Student-centered educational intervention programs have demonstrated that they can increase production of the former, but not necessarily the latter.

School-centered Educational Interventions

Because people who work in schools are well aware of the limitations of intervention programs that serve only a small number of students, intervene late in their educational careers, often provide only part-time help or involve selected curricula (e.g., focus on math or English), and usually have weak relationships with the schools that students attend, considerable attention has been directed toward school-centered programs. The theory of action behind school-centered programs is that by changing the entire ethos of the school, more children can be served and the intervention will be broader and more sustained. The decade of the 1980s opened with a call to reform the nation's schools with the publication in 1983 of *A Nation at Risk*. This was soon followed by a plethora of "effective schools" research, some focusing on effective schools specifically for Latino and other immigrant students and English learners. Unfortunately, almost all of this research was anecdotal, comprised largely of case studies of allegedly effective schools, with little systematic evidence to support the claims or recommendations that resulted from these studies. Moreover, the "findings" tended to be so general, such as the importance of a "strong principal" (Carter & Chatfield, 1986) or "school staff who are sensitive to cultural differences" (Lucas, 1997), that replication was extremely difficult. By the 1990s, the research on whole school interventions began to turn to investigating more specific reforms. Slavin and Madden (2001) reported on the effects of Success for All (SFA) with Latino and limited English proficient students; Opuni (1999) investigated the effects of Project GRAD on low income Black and Latino students. Small scale and short term studies have shown significant programmatic effects (Opuni, 1999; Slavin & Madden, 2001), but the long term effects are not yet known for any of these programs, and given the very high mobility rates of poor children, they may never be known.

Various efforts at "detracking" schools (offering high level curriculum to all students) have been documented (Oakes & Wells, 1998), but the long term effects of these strategies on raising student achievement are also unknown. James Comer's (1988) School Development Program is an example of a school-centered program aimed at raising the achievement of all students, but focusing on Black students. Comer's program includes heavy parent and community involvement, with the community, in large part, taking responsibility for schooling outcomes. Cook, Hunt, and Murphy (1998) evaluated the Chicago site of the School Development Program and concluded that while it held potential to raise the achievement of students, it was not clear that the practices that actually had an impact on student achievement were the same as Comer had intended. That is, there was significant variation in the way the program was designed and the way it was implemented.

Benard's (1996) work on resiliency also supports the whole school approach. She argues that whole schools need to intervene with appropriate support to nurture resiliency in low-income, disadvantaged (Latino) students. Renzulli and Reis (2000) likewise recommend the Schoolwide Enrichment Model to meet the needs of all students for more rigorous curricula that are tailored to individual strengths and needs. There has been no shortage of school reform efforts over the last two decades, but few have been rigorously

evaluated and fewer still have focused specifically on the advancement of Latino students.

The literature on school reform is rife with examples of schools attempting to reform to better serve low income, minority, and Latino students (e.g., Bohrnstedt & Stecher, 1999; Gándara, 2002; Johnson & Asera, 1999; Opuni, 1999). However, there is scant evidence on the effects of these efforts for increasing the incidence of high achievement among Latino students. While there is considerable agreement that reforming schools would have the broadest impact of the two strategies in increasing Latino achievement, there is also strong consensus in the field that reforming schools is long, hard work and that achievement outcomes for individual students are far from certain (Cuban, 1990).

PART 4: Summarizing the Explanatory Power of the Four Theoretical Models for Understanding Latino High Achievement

The foregoing discussion of explanatory models attempted to lay out the ways in which different disciplines have responded to the challenge of explaining how some Latino students, raised in poverty and disadvantage, manage to rise to high levels of achievement. The psychological perspective is rooted in the belief that in all ethnic and racial groups, there is a normal distribution of ability, and Latinos, no less than others, have their share of high ability, high achieving students. Entity theorists would argue that although current definitions of the construct are inadequate to the task and most assessment instruments are insensitive to cultural differences that can mask ability in culturally different groups, nonetheless, some Latino students survive the identification process and are "discovered." A second theoretical perspective—resilience theory— asserts that all humans have a natural tendency to "self-right," and that in spite of the disadvantage experienced by many Latino students, the happy coincidence of "protective factors"—such as a caring adult and a personality that is attractive to others—many survive and a few truly excel. Finally, achievement motivation theorists would point to parenting practices and other environmental factors that shape the behavior of individual students and their self-evaluations such that they are steeled to the task of overcoming the academic odds against them. Through appropriate child rearing practices and supportive home conditions, even low income Latino parents are able to produce high achieving students.

Sociological perspectives are rooted in group processes and emphasize social reproduction, or the strong tendency for those who are privileged in society to maintain their privilege by creating relatively impermeable social structures that benefit them exclusively. An example of these kinds of structures is the merit system of education that says "anyone can make it," but that is based on a grand system of tests, all of which have been calibrated to affirm the merit-worthiness of the skills and abilities of the privileged classes and to ignore the skills and abilities of others. Thus it is that verbal skills are highly rewarded in most standardized tests (Anastasi, 1988), while skills at building complex structures or designing complex artifacts are rarely ever tested. Nonetheless, those who adhere to the notion that social capital accumulation and creation can explain high achievement in some Latino students point to the ways in which even low income communities can and do create and share social capital. Supportive peer groups, teachers with a passion to create opportunities for their students, and parents and communities that share their "funds of knowledge" with students are examples of the creation of social capital that leads to high achievement for some Latino students.

Hard social structures, such as bureaucratic systems and testing regimes, are more difficult to affect, but some examples do exist. Affirmative action is one such example. The perception on the part of some that affirmative action has been "too effective"—a perception that is easily dispelled by looking at national data that show an intractable achievement gap and very modest progress for most minorities—has led to a number of attempts to curtail the practice. Bilingual education can be viewed as another attempt to

circumvent structures that control the distribution of power and privilege. By asserting a right to learn in a language that they understand, some Latino students have benefited from instruction tailored specifically to their needs and they can demonstrate high levels of competence. However, skills that are assessed in another language are almost never considered valid measures of ability in the United States. Attempts to build structures that benefit the disenfranchised can be expected to meet with strong resistance from the privileged classes and require political, rather than educational, intervention.

There has been considerable activity in the area of socio-cultural research that grows out of an anthropological perspective. This theoretical orientation asserts that "high achievement" is a social construct and that those who are chosen as exemplars of this construct generally conform to the social and cultural practices of the dominant culture. Thus students who feel marginalized by the dominant culture have the "choice" to abandon their own cultural identities and assimilate to majority cultural practices or to exist outside of them. For those who choose the latter, the option is often to drop out of school or to "resist" school in ways that lead to poor achievement. Socio-cultural theorists, however, have uncovered another pathway: the "bridging multiple worlds" strategy in which some Latino students manage to straddle multiple cultures, develop multiple reference groups, and move back and forth among different groups. Gibson (1988) refers to the way this is practiced in a Sikh community as *accommodating* to the demands of American schooling without *assimilating* into the culture. The advantage of this strategy is that it allows students to maintain their cultural identity, which is a critical social and psychological asset, and still rise to levels of high achievement in school. Gándara (1995) demonstrated that students in her sample of high achieving Latino students were able to maintain multiple reference groups that supported both achievement aspirations and ethnic identity.

Finally, the literature on educational perspectives has focused on the ways in which schools and educators intervene to either effect changes in student performance (student-centered approaches) or schooling practices (school-centered approaches). These theoretical perspectives tend to be more grounded in practice and are best described as "theories of action." There is considerable research on these efforts, and there is good evidence that student-centered approaches can and do result in students raising their aspirations, graduating from high school, and going on to college in higher numbers. It is not clear from this research, however, the extent to which these programs actually produce "high achievement." One reason for this is the lack of precision in the construct. Not everyone agrees on what it means to be a high achiever. The school centered approaches, while holding the greatest hope for affecting the largest number of students and thereby having a broader social impact, are admittedly difficult to implement and little research exists to demonstrate what their actual or potential impact is on raising achievement to high levels for Latino students.

Given this understanding of the challenges in conceptualizing and defining high achievement and the ways in which it comes to be identified, what is known about efforts to increase its incidence for Latino students?

PART 5: Narrowing the Gap and Nurturing High Achievement Among Latino Students

Preschool Interventions

A substantial body of research has demonstrated that very early intervention can prevent negative outcomes for at-risk students (Haskins, 1989; Karoly et al., 1998; Schweinhart, Weikart, & Larner, 1986). What is less certain is the role that such programs can play in fostering high achievement in young children, especially Latinos, at risk for school difficulties. Campbell and Ramey (1995) reported on a carefully designed study of the effects of high quality preschool intervention: the Carolina Abecedarian Project. On the basis of a longitudinal study of mostly African American children, 7 to 10 years after intervention had ceased, the researchers concluded that early intervention in infancy resulted in superior academic outcomes including maintenance of IQ advantages and higher academic achievement than the control group or the early elementary group. The research supports the idea of intervening early and intensively in the lives of low income and minority youth and suggests that when intervention occurs early and extends over a lengthy period, intellectual gains may be sustained.

Head Start is the primary program supported by the federal government to intervene in the lives of low income and minority children, but Zigler et al. noted that because Head Start is a funding source and not a specific intervention, there is large variation in the way it is implemented. Robinson, Wienberg, Redden, Ramey, & Ramey (1998), however, found evidence that some former Head Start students were functioning at particularly high levels academically and investigated factors that might have contributed to this. They did not find evidence that Head Start itself was responsible for these outcomes, rather that features of the students' home environment differed from those of their lower performing peers. Of course, there is no reason why such home characteristics cannot be recreated in Head Start centers and disseminated to parents in culturally appropriate ways. Newer studies that have examined the effects of Head Start by racial and ethnic background find that cognitive gains are substantial and persistent for Mexican American children. When compared to stay-at-home siblings, they are able to narrow the test score gap with White children by at least one quarter and to close the gap in the probability of having to repeat a grade by about two-thirds (Currie & Thomas, 1996).

In sum, while most early intervention programs at the preschool level focus on closing the gap in developmental outcomes between disadvantaged students and their more advantaged peers, the evidence does suggest that early intensive enrichment can have long term effects on cognitive functioning. Thus this research lends support to the notion that early intervention could also have a positive impact on higher level functioning for children who are not at serious risk. Such interventions, however, generally fall into the category of experimental programs for gifted and talented preschoolers, a topic dealt with in greater depth later in the monograph.

K-8 Interventions

In the current era of school reform, numerous programs have been developed in K-8 to increase the academic achievement of under-performing students and schools. Virtually every school district in the nation is home to at least one special intervention program for underachieving students, and many schools operate multiple programs simultaneously (Slavin & Fashola, 1998). However, few of these programs have been widely replicated or carefully evaluated, hence it is difficult to know to what extent they have an impact on the achievement or cognitive functioning of program participants.

Slavin and Calderon (2001) surveyed the field of program interventions for Latino students in grades K-12 and found few that had been widely replicated or that met a loose set of criteria for evaluation rigor. Among those they concluded were very effective in increasing measured achievement were Success for All (Slavin, Madden, Dolan, & Wasik, 1996) and Lee Conmigo (the Spanish language version of Success for All). In addition to being programs that they have developed, these programs are highly prescriptive, with detailed, "teacher proof" lesson plans. Thus the consistency of curriculum and the tendency to even out the instruction provided by teachers of differing experience and skill may be responsible for a significant portion of the students' improvement. Some researchers have also questioned the findings of the report given that the only effective programs the authors were able to identify were those with which they worked.

Borman, Stringfield, and Rachuba (2000) reviewed the findings of the *Special Strategies* study (Stringfield et al., 1997) conducted for the U.S. Department of Education. Their review looked at the effectiveness of several schoolwide intervention programs in K-6, including Success for All, the School Development Program (Comer, 1988), Paideia (Adler, 1982), Chapter 1 schoolwide projects, and Chapter 1 extended-year projects. Data were aggregated to ascertain if they yielded significant improvement in academic achievement of program participants. All students served by these programs, as well as the control group students, were in schools serving low-income (minority) students. Data for students from the national study of Title 1, Prospects (Puma et al., 1997) were used as controls. Stringfield et al. found that Special Strategies' African American students learned at a faster rate than their controls, and that their achievement levels surpassed the controls' over the 4-year period of the study. More importantly, the high achieving African American math students not only grew at a faster rate, but they also surpassed the achievement levels of all initially high-achieving math students in the control group (Borman et al., 2000). Thus without disaggregating data to determine the independent effects of particular programs or implementations, the Special Strategies study did confirm that schoolwide reform efforts directed toward strengthening the curriculum (among other things) can have an impact on raising the achievement of high achieving African Americans to even higher levels. Conceivably such interventions could raise the achievement of Latino students to higher levels as well.

Most schoolwide reform efforts, as well as individual program interventions in high poverty, minority schools, are focused on raising students' achievement levels to

something akin to national norms. Very little attention is given in these programs to nurturing high achievement, and where some portion of the students are found to perform at very high levels, the findings tend to be reported as incidental to the overall goals of the program. There are no data to suggest that these high performing students are placed in programs for the gifted and talented as a result of their higher achievement. However, a finding that recurs in many of the individual studies is that the longer a student is exposed to the "treatment," whether it is the result of school reform, or individualized enrichment, the better the outcomes appear to be (Gándara & Bial, 2001). This suggests that high quality curricula, delivered to students consistently over a lengthy period of time can raise achievement. However, to what degree such interventions are capable of stimulating achievement at the high end of the continuum remains a researchable question.

Promising Practices at the Middle and High School Levels

While the evidence is thin that middle and high school interventions have a significant impact on academic achievement, it is clear that some practices are more associated with positive outcomes (school retention, higher aspirations, greater intellectual interests, and college matriculation) than others. Among the most effective strategies reported in the literature are (a) close monitoring of students' personal and academic growth; (b) providing access to high quality curriculum; (c) providing appropriate "scaffolding" to ensure academic success—tutoring, supplemental coursework, more time on task; and (d) providing academically-oriented, supportive peer groups. Unfortunately, there is little evidence that most intervention programs at the secondary school level are focused on producing exceptionally high achievers. Given the enormous challenges that many Latino students face, long histories of mediocre achievement, and the intransigence of most schools with respect to effecting changes in routine practice, the goal of college matriculation already sets the bar high. Gándara and Bial (2001) did, however, identify some practices that have the potential to foster high achievement. One such practice was the Dynamic Assessment Process associated with selection into the Posse Program.

Posse is a program based in New York City that attempts to identify and prepare low income, inner-city students with high potential for admission to one of several elite cooperating universities. The program is also a site for experimentation with the Dynamic Assessment Process that focuses on identifying non-traditional high school students with strong leadership ability and potential for success. The selection process for Posse is based on four principles that underline the program:

- Educational progress, personal development, and academic achievement are advanced by cooperative and supportive conditions of learning;
- Purposive involvement in social and political action designed to change the social context of one's learning contributes to a sense of polity that aids personal and academic development;

- Cultural, political, and social intelligences, as complements to traditional criteria, are useful variables for consideration in selection of students for selective colleges;
- Cultural, political, and social leadership are viable as categories of talents, and *comparable* to artistic, athletic, and scholastic abilities for the assignment of merit-based college scholarships.

The early evaluation of the program—and the assessment process involved in selecting students—gave considerable reason for optimism about its potential for identifying talent and nurturing ability in innovative ways. As a result, the Mellon Foundation has recently undertaken to investigate this model systematically over a 5-year period and is investing well over a million dollars to this end. Rather than employing standard measures of achievement such as GPA and SAT or ACT scores, the program evaluates students in small, cooperative groups based on performance skills evidenced in areas related to the program's guiding principles. Thus students are evaluated on such things as their ability to lead a group in cooperative problem solving, to draw on cultural knowledge to complete particular tasks, and to creatively address social issues that are posed to them (Bowman & Gordon, 1998).

Another program that has experimented with innovative practices for Latino students is the Puente project. It is operated in 36 schools in California and it draws on cultural knowledge and Latino literature to engage Mexican American high school students in rigorous, college preparatory work. Like Posse, it draws from a wide range of students with varying measured abilities, but seeks to build on their drive and interest in developing their abilities. Students are placed in rigorous, college preparatory English classrooms with teachers trained to incorporate high quality Latino literature and other culturally relevant material. They work in groups and dyads where they focus on reading, writing, and analytical skills. The students are also supported by counselors and mentors from their own community who represent models of high achievement. Students in Puente go on to college at significantly higher rates and demonstrate significantly higher interest in intellectual activity and in "being a good student" than matched control students from the same schools (Gándara, 2002).

These are isolated examples of programs that are experimenting with innovative methods for engaging underrepresented minority high school students in productive intellectual activity with the goal of producing high achievement. However, there are relatively few systematic efforts in the pre-college intervention area that are targeted specifically toward developing talent at the upper ends of the achievement distribution, and even these programs focus on a broad range of student abilities.

PART 6: The Role of Gifted Education in Nurturing High Achievement in Latino Youth

Gifted and talented education holds considerable promise for the nurturing of high achievement among Latino youth, and it can influence the field of early intervention in important ways; however, there remain several obstacles to a full realization of this potential. There are three points at which gifted and talented programs traditionally fail to incorporate Latino students into their frameworks: (a) in the definition of giftedness; (b) in the initial nomination of students; and (c) in the assessment and identification of students.

Definition

In spite of concerted efforts to broaden the definition of "gifted and talented," many schools and districts still rely on a very narrow conception of giftedness that essentially equates with high academic performance (Figueroa & Ruiz, 1999). A study by Callahan, Hunsaker, Adams, Moore, and Bland (1995) showed that the preponderance (48%) of districts in a national survey ascribed to the United States Department of Education (USDE) definition of giftedness ("high performance capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields") (P.L. 100-297, Sec.4103, Definitions), yet their use of assessment devices belied an adherence to this definition. Most districts assessed students primarily for general intellectual ability or IQ. For all of the reasons cited above, such tests more often screen low income and Latino children out of gifted and talented programs; they certainly do not tap into the non-intellective abilities or specific academic skills that are part of the USOE definition. Clearly, educators have difficulty matching non-intellective constructs to appropriate measurement tools (Callahan et al., 1995).

Nomination

The working definition that a district uses to identify students for gifted and talented programs will shape, to some extent, the kinds of behaviors that teachers and others look for in determining whether to nominate a student for the program. However, the ability of teachers to recognize giftedness in Latino students remains a vexing problem. A study by Burstein and Cabello (1989) underscores this point. They found that 38% of student teachers in their teacher preparation program believed that the reason more minority students did not qualify for gifted programs was because of cultural deficits. After specific training in the identification of these children, only 7% held this belief. However, most teachers do not receive specific training in identifying gifted behaviors in minority students (Archambault et al., 1993). Moreover, in a study by Forsbach and Pierce (1999) that randomly surveyed all middle and junior high schools in New York state, training in the identification of gifted minority students only increased the nomination of African Americans and Asians, but not Latino students. One reason that the investigators posited for this inability to recognize gifted behaviors in Latino students was teachers' limited understanding of the effects of language on classroom performance.

Assessment and Identification

The inappropriate use of a narrow range of assessment instruments remains an enduring problem in the field. In spite of years of research on identification and assessment of a broader range of gifted abilities, the field remains largely stuck in a traditional assessment model that relies heavily on tests of specific cognitive abilities that may lack construct validity for students for whom different skills and abilities have been fostered in their home environments (Figueroa & Ruiz, 1999). For all of the reasons previously mentioned, talented and highly able or creative Latino students may not perform well on any of these dimensions, and thus are overlooked as possible candidates for gifted programs.

Notwithstanding the difficulties in assessment and identification, there are many promising practices within the field of gifted education that can promote talent development in schools and programs that currently focus almost exclusively on "closing the gap." In some cases, the practices simply lead to better identification of talented youngsters from diverse backgrounds so that they are able to access high quality curriculum that is already offered in their schools. In other cases, the program strategies themselves may constitute important interventions that can help underrepresented students achieve at higher levels.

Beyond Gifted and Talented: Curricular Innovation and Access to Rigorous Curriculum

Frasier and Passow (1994) call attention to the assessment/treatment mismatch that often occurs in programs for the gifted. That is, while students may be identified for the program on the basis of a particular intellectual or behavioral strength, the program may, in fact, focus on developing quite different abilities than those identified in the student. One way to address this problem is to more carefully link assessment outcomes with the type of programming provided for children. Another approach is offered by Renzulli and Reis (2000) with the Schoolwide Enrichment Model. Based on Renzulli's (1978) three ring conception of giftedness (above average ability, high levels of task commitment, and high levels of creativity), SEM provides enrichment education at levels appropriate to different student ability levels in a whole school context. Some of the strategies that follow from this model include an emphasis on divergent thinking and the nurturing of creativity, process versus product oriented learning, problem solving and critical analysis as an important learning method, and complex tasks that allow for long term engagement and that have multiple component. Renzulli (1997) also makes the point that time is a significant variable in talent development. The same rich curriculum may be provided for non-traditional gifted students, but the time they are given to master it may need to be manipulated to accommodate their stage of academic development. Strategies developed in specialized programs are made available to all students, while still meeting the particular needs of those students who are considered to have special talents through continuation of services.

Once children go on to high school, the issues of gifted education tend to revolve more around access to a high level curriculum, including honors and AP courses. Here, as in virtually all other aspects of K-12 education, there are significant differences by ethnicity in students' access to demanding curricula. Table 7 shows the percentages of students enrolled in AP courses nationwide by ethnicity. These are the most recent data released by the Office for Civil Rights as of this writing, however, a review of these statistics over time shows remarkably little change from year to year.

Table 7

AP Mathematics Courses Taken in U.S. Public Schools by Percent Ethnicity and Gender, 1997

Ethnic Group	Male	Female	Total	Percent of Population
White	37.36	35.00	72.36	64.0
Asian	5.60	5.52	11.12	3.1
Hispanic	3.74	3.73	7.47	14.3
Black	3.26	4.13	7.39	17.0
Native American	.40	.40	.80	1.1

Source: U.S. Department of Education, Office for Civil Rights, 2000.

There is little in the literature that looks longitudinally at the careers of students identified early for gifted and talented programs as they move into high school. The literature suggests that these students should have easier access to high level courses both because they have been labeled as "gifted" and therefore are perceived to be capable students, but also because they have assumedly been exposed to a more enriched curriculum prior to high school. However, the extent to which access to high level curriculum (honors and AP courses) in secondary schools is assured for these students remains an empirical question.

Is There Evidence That Students in Gifted Programs Are Channeled Into More Rigorous Curricula?

If Adelman (1999) is correct that the rigor of the curriculum to which students are exposed is the best predictor of their long term outcomes (college attendance and completion) irrespective of race or ethnicity, then one of the most important roles that gifted and talented programs can play is in preparing and channeling students into upper level curricula. As Adelman points out, the best proxy for a rigorous curriculum is taking math courses beyond 2 years of algebra. Students who take beginning algebra in Grade 8 are on track to take high level math courses later in high school; those who postpone algebra will have a more difficult time reaching higher level math in the time remaining

to them in high school. Therefore, being assigned to algebra in the eighth grade is an important marker of a student's assignment to a rigorous curriculum and a good predictor of future academic attainment. Table 8 attempts to answer the question whether students from different ethnic groups who were in gifted and talented programs had an equal chance of being assigned to algebra in Grade 8; it displays the percentages of students from each major ethnic group that were in gifted and talented programs in Grade 8 and who were also assigned to algebra. All data are based on student self-report from the NELS 88 survey.

Table 8

Percent of Students in Gifted and Not in Gifted Programs Who Are Assigned to Algebra in Grade 8 NELS 88 Database

Ethnicity	Percent Gifted in Algebra	Percent non-Gifted in Algebra
White	73	28
Hispanic	52	26
Black	60	27
Asian	83	35

Evidently being in a gifted and talented program is highly associated with being assigned to algebra in Grade 8, suggesting that students who have been identified as gifted are generally perceived as being more academically able, at least in mathematics. Students in gifted and talented programs were two to three times more likely to be assigned to algebra than those students who were not in the program. For students not in a gifted program, differences among ethnic groups in the percentage of students assigned to algebra were relatively small. However, there are considerable discrepancies by ethnicity in assignment to algebra for students who are in a gifted and talented program. Asian and White students are much more likely to be assigned to algebra than are African American and Latino students. Latino students have the least likelihood of being in algebra, whether they are in the program or not. Why would this be? We then examined grades and achievement test scores for each of the groups to determine if students' grades or test scores were responsible for the discrepancies in algebra placement. Table 9 displays the percentages of students falling into each test score quartile and at each of four levels of grade point average by ethnicity.

Table 9

Percent of Students With Specified Grades and Test Scores by Ethnicity for Grade 8, Gifted and Talented Students, NELS 88 Database

Ethnicity	Test Score 1st Quartile (Low)	Test Score 2nd Quartile	Test Score 3rd Quartile	Test Score 4th Quartile (High)	Grades Less than 2.0	Grades 2.0—2.99	Grades 3.0—3.49	Grades 3.5+
White	18.1	25.8	30.3	23.0	2.2	15.3	20.0	62.4
Hispanic	29.7	22.6	22.9	20.9	6.9	24.8	28.3	40.1
Black	39.6	19.1	13.7	18.9	17.7	30.4	22.6	29.3
Asian	11.4	7.7	17.0	37.9	2.2	7.5	21.7	68.7

Grades and test scores probably explain a fair amount of the variance in assignment to algebra in the Grade 8 by ethnicity. For White students, 82.4% had overall grades of 3.0 or higher, and for Asians, 90.4% had 3.0 or higher, and grades correlate highly with assignment to upper track classes. However, the fact that Latino students were less likely than African Americans to be assigned to algebra is not explained by grades or test scores, inasmuch as both were higher for Latino than for African American students. This may be related to other findings noted earlier that teachers are somewhat less likely to identify Latino students for gifted classes and that even training in identification procedures does not appear to reduce this problem substantially. The discrepancies in grades among different ethnic groups does raise another fundamental concern, however: Are students from different ethnic groups being selected into gifted and talented programs on the basis of very different criteria? And, if this is the case, does the curriculum to which they are exposed in the program meet their needs equally? Put another way, does the experience of being in a gifted program contribute significantly to closing the high achievement gap between groups? The labeling effect of being identified as gifted may be a factor in some African American and Latino students being assigned to algebra (given their overall lower grades and test scores). However, it is difficult to know to what extent the benefits of the program extend beyond the label for these students.

An important area of curricular innovation in secondary gifted education for Latino students has been launched by the Johns Hopkins Center for Talented Youth (CTY) at several sites around the country. CTY Prep in the Los Angeles is an example of the model being generated by the Center. This program provides intensive summer enrichment programs for Latino students identified as gifted through the Center's national testing program. However, the students in CTY Prep do not yet meet a level of measured ability (between 95th and 97th percentile on the program administered test) to qualify. Thus, the programs provide Saturday and summer enrichment programs, based on the model developed by the Center for gifted students, to help prepare these second through eighth graders to eventually qualify for acceptance to the Talent Search program. The content of these programs focuses on in-depth study of high interest curricula; hands-on, collaborative, and discovery-oriented learning. University experts are called upon to help guide students through field and laboratory-based projects. As a new project, there is not yet any evaluation data on the programs' effectiveness, however, like the Renzulli and Reis (2000) model of Schoolwide Enrichment, this innovative program has the objective of applying research on the education of the gifted to young minority children in an effort to *develop* talent. Moreover, some evidence suggests that this type of instruction may produce better outcomes for most low income Latino students than more traditional remediation or drill-based approaches (Levin, 1987). These are potentially important models for application to the field of early intervention if they are able to produce a new cadre of high achievers.

In sum, innovative and culturally sensitive identification and assessment aimed at increasing the numbers of Latinos in programs for the gifted and talented tend to rely heavily on diagnostic teaching practices, behavioral checklists and scales, and broader interpretations of "giftedness" or high ability, including multiple intelligences (Gardner,

1993) and creative problem solving (e.g., Torrance, 1966). They also focus heavily on training teachers to identify a wide range of competent behaviors.

Preliminary evidence suggests that these methods are more effective than traditional means of identifying talented Latino youngsters at early ages. There was no evidence found in the literature, however, for long term outcomes of these experiments. Thus we do not know if those students who are identified for programs have better long term academic outcomes than similar students who are not so identified or who are identified on the basis of more traditional criteria. We also do not know if such students are ultimately able to reach levels of academic achievement or attainment that are comparable to their White and Asian peers. Programs that have targeted the education of non-traditional gifted students usually incorporate the same teaching methods and curricula that high quality programs for other gifted children experience, but they may be accompanied by more "scaffolding"—that is, they may provide more assistance, more time, or other supportive resources to help children move from where they are to where they want to be.

PART 7: Conclusions

There are three major problems to be confronted in attempting to increase the number of Latino students who achieve at very high levels. One is gaining consensus on the definition of constructs. There is little consensus around the terms "high ability," "high achievement," and "gifted." And it is quite possible that there is little relationship among them. The second is the problem of identification of individuals with high *potential* for achievement, an even more illusive construct. Finally, the third challenge is the provision of appropriate educational services to help more Latino students realize their potential.

While great strides have been made within the field of gifted education in acknowledging the problems associated with identification—definitions of giftedness and talent that are too narrowly drawn, are overly dependent on developed academic skills, and fail to account adequately for cultural and linguistic differences in the expression of ability; the inability of teachers to recognize other characteristics of high ability or talent in Latino students; and the inadequacy of most standardized tests to measure such abilities in these students—practitioners often fail to practice what the leading edge of the field preaches. Thus Latino students remain seriously underrepresented in programs for the gifted and talented. This is especially unfortunate for at least two reasons. The evidence suggests that placement in these programs can lead to greater access to high quality instruction, college preparatory classes, and AP and honors courses—all critical elements in developing academic talent. But it is also unfortunate because the field of early intervention remains fixated on a "closing the gap" approach to increasing achievement for Latino students that pays relatively little attention to those students at the high end of the achievement continuum. Thus effective alternatives to developing talent outside of special programs, such as gifted and talented, are rare. Unfortunately, if students are not identified early for participation in such programs, they are unlikely to encounter the kind of enrichment in regular educational programs that will stimulate *high* achievement.

The early intervention literature yields the finding that high quality curriculum, delivered consistently over a long period of time, can have an important impact on student outcomes. However, most early intervention programs do not appear to significantly increase the academic achievement of their participants because the intervention is either too little, too late, it does not last long enough, or it focuses on narrow aspects of the curriculum or the schooling experience, leaving most of the students' normal educational routines intact. As Renzulli (1997) points out, to have any substantial effect on developing high levels of talent, the whole of instruction must be addressed—both content and pedagogy.

Under current conditions, gifted education, early intervention, and school reform are all compartmentalized, serving particular constituencies in an uncoordinated fashion that fails to maximize their possibilities. If early intervention programs were to coordinate with school reform efforts and embed themselves more deeply in the day-to-

day school routines of students, they could have a more pervasive and powerful effect. Moreover, if school reform and early intervention were to borrow from the teaching and learning strategies developed in gifted education programs, they could strengthen the educational experience of all children and increase the yield of high achievement for Latino students as well as others.

The research suggests that talent can be developed and not simply discovered, but this requires a much more sustained effort than we have made to date. Intervention must occur early with a focus on enrichment instead of remediation, and it must be sustained at high levels throughout the educational pipeline with the objective of fostering high achievement and not just closing the (low) achievement gap. One clear lesson from the intervention literature is that the earlier the intervention occurs and the longer it lasts, the greater are its outcomes. Moreover, interventions such as Renzulli and Reis' Schoolwide Enrichment Model that attempt to apply *specific strategies* developed in gifted education to whole school settings hold hope for narrowing the gap among ethnic groups and stimulating higher achievement in all children.

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