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ABSTRACT

A study was conducted at two California community colleges to examine the academic progress toward transfer of potentially at-risk Hispanic students who had indicated transfer as a goal. Specifically, a comparative analysis was conducted of student outcomes at the two colleges, which had traditionally placed disparate emphases on transfer, with one college referred to as High Transfer College (HTC) and the other as Low Transfer College (LTC). A questionnaire distributed to 136 first-year students enrolled in fall 1991 sought to determine students' "at-risk" characteristics (i.e., parent education level, income level, and previous academic record) and protective factors (i.e., self-concept, control locus, and support sources). An analysis was then conducted to determine any differences in student progress at HTC and LTC. Study findings included the following: (1) students at HTC made greater academic progress than students at LTC in their first year of college; (2) students at HTC were more aware and made more use of the campus transfer center than at LTC; (3) transfer center use appeared to contribute to students' academic progress at LTC; and (4) while student performance at both colleges was related to enrollment status and hours worked, HTC students' success was also related to high school grades and locus of control, while LTC students' success was related to income, use of the transfer center, and reliance on support from friends. A list of definitions, the survey instrument, and 92 references are appended. (MAB)

Defying the Odds: Academic Performance Toward Transfer of Hispanic First-Year Community College Students

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Abstract

The burgeoning population of Hispanics in the United States has led to increased concern over their declining college attendance and degree attainment in postsecondary institutions as compared to white students. The disparity of enrollment is accentuated further by the low transfer rates of Hispanics from two- to four-year institutions, thereby, creating severe leakage in the educational pipeline to baccalaureate and postgraduate degree levels. Moreover, Hispanic students all too often are classified as most academically at-risk to stay in college and persist to transfer and degree completion. Nonetheless, there are some Hispanic students with perceived at risk characteristics who are exceptions to the negative expectation, and who do complete transfer requirements and continue their education toward a baccalaureate degree in a four-year college.

This exploratory study examined the academic progress toward transfer of first-year Hispanic students with potential at risk characteristics who had declared transfer as their educational goal upon enrollment in the community college. Specifically, the research sought to determine if the academic progress toward transfer of Hispanic students with potential at risk characteristics was due to the particular presence of protective factors (i.e., personal and environmental) which help them negotiate and survive in the academic environment. The study was conducted in two California community colleges with differing transfer rates and data were collected through survey questionnaires and student transcripts. The two sites differed substantially in their approach to the transfer function for Hispanic students. Moreover, results indicate that the two community colleges were distinguished by the Hispanic students who attended each college as evidenced by their personal, demographic, and at risk characteristics, and by their protective factors.

Statement of the Problem

Researchers have long shown an interest in describing the educational attainment of Hispanics relative to whites and other ethnic groups. What is evident in all of the research to date is that there is a clear and alarming pattern of low completion rates and low transition from one level of education to another occurring for Hispanics. Using the metaphor of an "educational pipeline," Astin (1988, p. 25) refers to the low completion rates as creating serious "leakage points" in the educational system to illustrate graphically the large number of Hispanics and other ethnic minorities who are dropping out along the way. Astin elaborates:

> If one views the educational system as a kind of pipeline leading ultimately to positions of leadership and influence in our society, it is possible to identify five major 'leakage' points at which disproportionately large numbers of minority-group members drop out of the pipeline: completion of high school, entry to college, completion of college, entry to graduate or professional school, and completion of graduate or professional school.

Hispanics, along with African Americans and Native Americans, are more underrepresented at each progressive transition point in the educational system (Carter and Wilson, 1990; Astin, 1988). In fact, given the educational achievement of Hispanics, one might go so far as to liken the leakage points to severe hemorrhaging that threatens the economic well-being of both Hispanics and society. This section focuses on three major leakage points in the educational pipeline: completion of high school, entry to college, and completion of college, with the inclusion of a fourth leakage point not identified by Astin, the transition from two- to four-year colleges.

High School Completion

What are the national educational statistics for Hispanics which raise such concern about leakages and drop outs? To begin with, the drop out rate for Hispanics increases significantly at each age level, starting in the ninth and tenth grades, and accelerates during the last two years of high school (Duran, 1983). A review of high school graduation rates for Hispanics over the last 20 years shows a steady decline and accentuates how far Hispanics lag behind the population as a whole at all levels of schooling (Duran, 1983; Lee, 1985; Carter and Wilson, 1990). In a study from 1974 to 1978 (Astin, 1988), findings indicate that half of the Chicanos and Puerto Ricans did not finish high school as compared with fewer than 20 percent for whites and about 30 percent for African Americans. The picture was not substantially different almost ten years later in that only 59 percent Hispanics had completed high school in 1985 as compared to 84 percent for whites (Nora and Rendon, 1992). Olivas (1986) concludes that given the educational statistics and the increasing number of Hispanics in the U.S., Hispanic students are much less likely

than white and African American students to complete high school or graduate with their age group. The data confirm that disturbingly low high school completion rates for Hispanics continue to accelerate, leading to severe leakage in the educational pipeline at an important transition point from high school to college.

Going on to College

The extremely low rate of high school completion for Hispanics remains a major reason for the low number continuing on to college. Overall data on the status of minorities in higher education show that Hispanics and African Americans, as well, are much less likely than whites to participate in higher education. While Hispanics may have low high school graduation rates, those who do graduate have helped increase the number going to college. Those who do go to college are continuing to enter less prestigious and less affluent institutions, but regardless of where they go, Hispanics are still not enrolling in large numbers. The college participation rate for all 18 to 24 year-old Hispanics remains lower than for other groups. For example, in 1989, only 16.1 percent of all Hispanic youth in this age group were enrolled in college as compared with 23.5 percent of all African Americans and 31.8 percent of all whites in the same age group (Carter and Wilson, 1990).

Community colleges have remained the primary access to higher education for most Hispanics since the 1960s when colleges and universities began to open their doors to non-traditional students in greater numbers. Often called the gateway to higher education for low-income and ethnic minority students, community colleges are still best known for their open door, open access policy for admitting students, their relatively simple admissions procedures, and their low educational costs as compared to senior institutions. As of 1988, at least 55 percent of the Hispanic students enrolled in higher education institutions were concentrated in community colleges and, of those, 65 percent were enrolled part-time. Part of the high enrollment of Hispanics in community colleges is attributed to "geographic coincidence" related to their high concentrations in states with the most highly developed community college systems, Arizona, California, Colorado, Florida, New York, and Texas (Cohen, 1988). Nonetheless, their high enrollment in community colleges is further cause for concern when measured against the lower enrollment figure of 38 percent for whites in the same institutions as well as their lower completion and transfer rates (Carter and Wilson, 1991).

The profile of who attends community colleges has changed over time, particularly in the last 25 years. Community colleges, in general, enroll students who tend to be increasingly minorities, are from lower SES groups, have lower educational aspirations, come with lower academic preparation, and have lower achievement levels (Cohen and

Brawer, 1989; Lee and Frank, 1989). Students enrolling in community colleges are increasingly Hispanics and African Americans, increasingly female, drawn less frequently from groups of high SES and high ability as measured by achievement tests, and come less often from the academic track in high school (Grubb, 1991). These students also are older, tend to have higher participation on a part-time basis, and tend to be less integrated academically and socially with the institution (Carter and Wilson, 1990; Cohen, 1988; Cohen and Brawer, 1989). The proportion of community college students expressing aspirations for earning the bachelor's degree and advanced degrees increased between 1972 and 1980 (Grubb, 1991).

Transfer to Four-Year Institutions

Hispanics attempting to transfer from community college to senior institutions pose another set of concerns. While the issue of transfer rates for Hispanics is of vital concern, it is, in fact, a serious issue for all community college students. Overall transfer rates have been relatively low compared to the total number of students who attend community college and of those who express interest in transferring and obtaining a bachelor's degree. The relatively low percentage who transfer is attributed in part to the fact that many students enroll in courses which do not transfer, and, thus, do not lead to the bachelor's degree (Richardson and Bender, 1987).

Using NLS 1972 and HS&B 1980 data, Grubb (1991) found that the overall transfer rate for all groups has declined, with greater decreases occurring for women, Hispanic, and African American students. Some researchers (Brint and Karabel, 1989) report the overall transfer rate to be as low as five percent and as high as 25 percent. The lack of better specificity of transfer data is due to two major methodological reasons: one, the different data collection methods, and two, the different analytical and interpretation methods used by institutions. Much of the available data are specific to institutions rather than nationally representative; hence, when the data are compared across institutions they yield conflicting and unreliable findings (Cohen, 1988). In fact, few community colleges can follow their students who transfer beyond several receiving senior institutions and often for not more than a few years, thus creating a serious undercount of who transfers and where (Grubb, 1991; CPEC, 1990). Moreover, there is no uniform definition or system of measuring the transfer rates currently being used.[1]

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[1] There are at least nine alternative definitions and methods of measure in use to determine transfer rates. The differences revolve around who should be included in the *numerator* (students who are qualified to transfer and/or do so) and the *denominator* (the number of community college students who are bona fide potential transfers) (CCC, 1991).

Nonetheless, the number of how many Hispanic students who transfer is relatively low compared to white and other ethnic minority students regardless of how the data are gathered, interpreted, and used (CPEC, 1991). The fact remains that for the many Hispanics who do enter community college, few achieve their educational goals of associate degree completion and/or transfer, thus, again accentuating another major leakage point in the educational pipeline.

Completion of College

Although the Hispanic population continues to grow at a rapid pace nationally, the enrollment of Hispanics in higher education institutions has not kept pace. *Access to college* and *persistence in college* are clearly differentiated when one examines the record for Hispanics. According to Carter and Wilson (1990, p. v), ". . . as of 1989, young adult Mexican Americans, who make up a substantial majority of all Hispanics, showed little improvement in attending four or more years of college." These researchers state that for 1980 Hispanic high school graduates who entered college immediately the following fall, only 42.3 percent persisted after four years compared with 55.6 percent for white students. After five-and-a-half years of full-time study, 32.3 percent Hispanic students had obtained the bachelor's degree as compared with 55.8 percent for white students.

For the 13-year period from 1976 to 1989, there was a 10.4 percent increase in the conferring of bachelor's degrees to Hispanics. But, overall, the progress has been slow with an average awarding of degrees to Hispanics of 2.5 percent per year as a percentage of all bachelor's degrees awarded. This is especially dismaying when compared to an average award percentage of 85 percent for whites (Carter and Wilson, 1991). In sum, even with a slow, gradual increase in degrees awarded to Hispanics, the completion rate remains very low.

The somewhat good news is that, while their transfer rates are low for all groups studied, for certain Hispanic students who started in community colleges completing the bachelor's degree has increased slightly (Grubb, 1991). These Hispanic students tend to be from low SES with high-ability levels, as well as students from middle SES with high-ability levels who might have access to attending four-year colleges. Furthermore, Grubb found that 5.9 percent of the high-ability Hispanics who initially enrolled in community colleges had completed the bachelor's degree within four years of leaving high school while 20.9 percent had done so within seven years of leaving high school. However, there have been sharp declines in the proportion of bachelor's degree recipients among students starting in vocational programs and those with lower aspirations.

It is possible, given Grubb's findings, that the community colleges may have taken on greater importance as a route to the bachelor's degree for Hispanic students who have

mid-to-high ability and high aspirations, come from lower income backgrounds, and see these two-year institutions as a viable, affordable alternative route to pursuing their educational goals. Given the current sharply declining economic resources of most colleges and universities, coupled with rapidly increasing student costs for pursuing a bachelor's degree, more Hispanic students as well as high achieving students from other groups may increasingly select community colleges as their entry point into higher education as a cost-saving measure and elect to transfer upon completion of lower division course requirements.

A National Problem

The current interest in addressing the underrepresentation of Hispanics and other underrepresented groups in four-year institutions and their low transfer rates from community colleges is a national problem. It is important for researchers to achieve a greater understanding of the factors that affect the academic progress of Hispanic and other ethnic minority students in light of the current and continuing interest in increasing the transfer rates for all ethnic minority students underrepresented in higher education (Joint Commission for the Review of the Master Plan for Higher Education, 1987; CPEC, 1989a; CPEC, 1989b; Rendon, et al., 1988; Center for the Study of Community Colleges, 1985; Astin, 1988; Cohen and Brawer, 1982, 1989; Richardson and Bender, 1987). Thus far, most researchers have concentrated their efforts on explaining why Hispanics have lower transfer rates than whites and are more at risk academically to succeed; hence, they have tended to focus on the socioeconomic variables associated with academic success, namely parent education and occupation, family income and composition, and prior academic preparation (Cohen and Brawer, 1982, 1989; Astin, 1988; Turner, 1988). These variables, however, lend themselves to being reframed as preconditions which all students bring with them into the academic setting.

Although many Hispanic students with at risk characteristics fail to achieve satisfactory academic progress within the community college setting, some succeed and complete the transfer process. The research reported in this paper examined both within group and between group differences to illuminate why some Hispanic students with seemingly at risk characteristics succeed academically despite the odds against them. Two groups of first-year Hispanic community college students were studied in an effort to determine whether at risk characteristics and personal and environmental factors might account for their differential academic progress toward transfer to a four-year college.

Review of the Literature

A review of the literature reveals sharp differences between proponents and critics in their views of factors which promote and/or inhibit persistence and degree attainment for ethnic minorities in higher education, especially at the community college level.

Persistence and Attainment Studies

Earlier research tended to be student-centered in "blame the victim" explanations (Pincus and Decamp, 1989). Researchers argued that low attainment rates for students from low-income and minority backgrounds are related to such factors as personal characteristics associated with the individual and the home environment as well as associated with poor academic performance and preparation in high school (Astin and Burciaga, 1981). Others assert that non-traditional students are set apart from traditional students by distinctions such as generally being older, commuting from work to classes, and attending part-time. They also are distinguished by the lessened intensity and duration of their interaction with faculty and peers who are able to contribute to their socialization in the academic environment (Bean, 1980; Bean and Metzner, 1985) and the degree to which students interact with accessible academic and social support systems (Tinto, 1975, 1987).

Some studies have focused on the individual in an attempt to understand the situation better and to identify individual factors leading to academic persistence and success in college for ethnic minority students. In an annual survey of two- and four-year entering college students, Astin (1988) found that ethnic minority students with good high school grades, well-developed study habits, and high self-esteem have the best chance of persisting in college. Background characteristics for ethnic minority students found to be most important as predictors of success in college by others (Brown, 1987; Clewell and Joy, 1986) were high school GPA, performance on standardized aptitude tests, educational aspirations, and SES. Specifically, Clewell and Joy (1986) found the high school GPA to be the best single predictor of first-year academic performance for high-achieving Hispanics. In addition to academic factors, findings reveal that for Hispanic, as well as African American and Native American students, educational access and ability to perform and to complete college successfully are related to demographic factors, such as age, race, sex, and socioeconomic status (Carter and Wilson, 1990; Astin, 1975, 1988). Type of institution, that is, attending a four-year institution from the freshman year rather than beginning at a community college, also was found to be significant for persisting toward baccalaureate completion, more so for underrepresented students (Astin, 1988).

More recently, researchers (Rendon, 1982; McCool, 1984; Nora, 1987; Turner, 1988; Nora and Rendon, 1990; Rendon, 1992; Laden, 1992) have begun to study Hispanic students enrolled in community colleges to identify factors leading to academic success.

Findings indicate that Hispanic students who enter with a strong commitment to succeed academically and with clearly defined goals appear to have a higher degree of success in achieving their educational goals. Developing institutional loyalty through increased social interaction was found to contribute to having a sense of greater ownership to the organization and leading to greater persistence, as well.

Other researchers have directed their efforts to the organization to determine how the community college itself might affect student persistence and completion. Some of the studies have uncovered negative organizational factors leading to detrimental effects for students. The organizational explanation argues that community colleges create a set of conditions which work against the students' educational goals. Organizational factors that "cool out" individuals (Clark, 1960) and subtly encourage then to reconsider and redefine their educational goals, rather than "warm them up" and retain them were attributed to the community college. Examples that dissuade students from striving successfully toward their goals include offering inadequate course selections, providing insufficient information about associate degree and transfer opportunities, and failing to teach students critical thinking skills necessary to succeed in a senior institution or in the job market. Not surprisingly, these conditions were found to have the added effect of discouraging some students, especially low income and ethnic minority students, from pursuing their academic majors, scaling down their educational goals, or even questioning staying in college. Thus, findings such as these suggest that community colleges, in effect, contribute to lowering college completion rates for those who can least afford to be under educated and under employed and to permanently stratifying their positions in lower rungs on the socioeconomic ladder (Karabel, 1972).

Some researchers (Cohen and Brawer, 1987) argue that it is the very organizational infrastructure of community colleges which contribute to students having low persistence and completion rates. Examples include the open door policy inviting any and all to enter, offering students easy entrance and easy withdrawal with no penalties, encouraging part-time attendance if they are too busy to attend on a full-time basis, providing remedial and second language courses if they are not prepared to perform at a college level, and a gradual diluting of the curriculum to accommodate the increasingly diverse population of students and range of language skills and abilities found in the same classrooms. In effect, the community colleges have developed the reputation of being revolving door colleges in trying to be "all things to all people."

Studies which focused on both the individual and the organization looked at students in general (Tinto, 1975, 1987; Bean, 1980) in an effort to get at the factors influencing persistence and departure. From his study of four-year residential colleges,

Tinto (1975, 1987) developed a theory to explain what motivates students to leave college. Tinto posits that the greater the integration is between the academic and social systems for the student, the greater the student's commitment is to persist. Bean (1980) examined college attrition based on the notion that beliefs shape attitudes and attitudes shape behavioral intents. Beliefs are presumed to be affected by the experiences of the student within the institution, such as courses, quality of institutions, and sources of support, which in turn shape behaviors leading to persistence or departure.

Building on these and other four-year studies of academic and social integration that examine student departure, some researchers (Nora and Rendon, 1990; Turner, 1988; Nora, 1987; Rendon, 1982) focused specifically on both organizational and individual characteristics to identify factors which positively affect Hispanic students' persistence in the community college. In that light, Nora and Rendon (1988, 1990) examined determinants of predisposition to transfer among Hispanics. To no one's surprise, they found that students with high levels of academic and social integration in the community college tended to be more predisposed to transfer. For instance, organizational factors such as the formal and informal encouragement teachers, counselors, and administrators give to Hispanic students seemed directly related to their completing more college units and reinforcing their commitment to stay and persist in college. Greater persistence also seemed to strengthen students' internal commitment to the academic and social fabric of the organization itself. Individual characteristics found to be positively associated with transfer success include having full-time enrollment status, completing more college credits, majoring in an academic field, having high aspirations, engaging in higher order thinking activities, seeking out a counselor to provide transfer information, and receiving special attention from one or more faculty members (Lee and Frank, 1989; Richardson and Bender, 1987; Cohen, Brawer, and Bensimon, 1985; Neumann and Riesman, 1980).

Other studies (Turner, 1988; Nora, 1987; Olivas, 1986) also examined support systems external to the classroom. Having the financial means to stay in college, such as through higher levels of campus-based financial aid and on-campus jobs, was found to help retain students. Structures for communicating with students to make and sustain contact with them, such as a campus newspaper, college orientation for new students, and access to teachers and counselors in informal ways were found to increase students' connection with the organization. Overall, increasing their awareness of options and academic and social support systems available to them seemed to enhance Hispanic students' commitment to their goals, led to greater academic and social integration, and to higher persistence rates.

National Reform Efforts

The acknowledged low transfer rates of Hispanics and other ethnic minorities have prompted numerous reforms at both the national and state policy levels. In the 1980s, Arizona, California, Colorado, Florida, Illinois, Maryland, New Jersey, and Texas led a national reform movement directed at improving institutional effectiveness in both two- and four-year colleges (CPEC, 1990; Educational Record, 1988; Chronicle of Higher Education, 1986; Savage, 1985; Bray, 1984). For the community colleges, major changes related to student performance, persistence, and completion of associate degree and the transfer function began to be addressed in earnest. Grubb (1991, p. 212) refers to this period in the 1980s as when the community colleges:

> . . . Abandoned the *laissez-faire* practices that prevailed during the 1970s and began instituting student tracking and information systems, requirements related to minimum progress, improved counseling, transfer centers, articulation agreements with four-year colleges, and other mechanisms which might be expected to improve transfer.

Among the major outcomes of the reform movement in this decade was reasserting the viability of the transfer function. In some states, such as California, the reforms led to a review of the master plan for higher education, improved articulation agreements and the development of transfer admissions agreements between the senior and junior institutions, an increase in transfer programs including more transfer level courses and services, and the encouragement to develop transfer centers with an emphasis on increasing the number of underrepresented students interested in transfer.

Hispanics in Higher Education in California

What are the demographic conditions in California, especially for Hispanics, that led to a review of the state master plan and higher educational reforms? There were three major concerns specific to Hispanics in the state which could no longer be ignored: (1) the large and still growing population of Hispanics in California; (2) their low enrollment and low persistence and completion rates in higher education; and (3) their low completion and transfer rates in community colleges given their high enrollments.

First, Hispanics now represent 25 percent of the total state population. That is, one in four of every individuals living in California is Hispanic. Moreover, this population also is the youngest and fastest growing in the state and in the nation (1990 U.S. Census).

Second, Hispanics continue to be underrepresented in higher education although the overall state enrollment in higher education for the general population is 6.7 percent and exceeds the national average of 5.1 percent. To illustrate, in 1989, the total state undergraduate enrollment was 1.7 million students, with 7.1 percent (123,441) enrolled in the University of California [UC], 16.6 percent (289,173) enrolled in California State

University [CSU], and the largest share, 65.1 percent (1,136,119) enrolled in community colleges. Yet, of the **total** higher education student enrollment, Hispanics represented only 11.8 percent (206,349) of all students enrolled in two- and four-year institutions (CPEC, 1992).

Third, the underrepresentation of Hispanics becomes more acutely pronounced when their distribution within higher education institutions is noted. In 1989, 78.1 percent (161,129) of all college-going Hispanic students were enrolled in community colleges (CPEC, 1992). While their enrollment is high in these institutions, their persistence, completion, and transfer rates are low, especially when compared to white and other ethnic minority students. Of the total number of students who transferred (40,995) in Fall 1990, only 10.7 percent of the Hispanics transferred to UC and 12.3 percent transferred to CSU. By comparison, 58.8 percent of the white students transferred to UC and 57.6 percent transferred to CSU (CPEC, 1992).[2]

In sum, the alarming disparity of transfer rates from two- to four-years colleges between whites and Hispanics in California reflects almost a six to one ratio, particularly when Hispanics comprise one-fourth of the population in the state and continue to increase rapidly in number. It further illustrates another leakage point in the educational pipeline whereby few Hispanic students in California are completing transfer requirements and moving into senior institutions.

Conceptual Framework

The participation of Hispanics in higher education, regardless of how it is defined or measured, is proportionate neither to their percentage of the national population nor to their percentage of the school-age population as a whole (Olivas, 1986). In effect, the educational pipeline is not working for Hispanics; rather, it is leaking badly at points all along the pipeline. This study is premised on the notion that although Hispanic students are less likely to transfer than white students from community colleges to senior institutions (Cohen and Brawer, 1987; Cohen, Brawer, and Bensimon, 1985; Richardson and Bender, 1987; Turner, 1988; Rendon et al., 1988), there are some Hispanic students who do transfer. Among those select few who are fortunate enough to defy the odds are some students with potential at risk characteristics who are exceptions to the negative expectation of achieving any degree of academic success, yet who do complete transfer requirements and continue their education toward a baccalaureate degree in a four-year college or university. To what is their success due? This study sought to examine protective factors

[2] Students transferring to independent institutions and out-of-state institutions are not reported to CPEC by ethnicity because the data is not always reported or reliable. For 1990, 4,205 or 10.3 percent transferred to these other institutions of the 40,995 who transferred.

which influence Hispanic students with potential at risk characteristics during their first year in community college, specifically, those who declared an intent to transfer upon entry to the institution and who made academic progress toward transfer in their first year.

At Risk Factors

The research literature is replete with studies that focus on the dropout rate and at risk status of students enrolled in high school and postsecondary institutions. The phenomenon affects both majority and minority students, that is, both white students from the dominant mainstream society and students from diverse racial and ethnic backgrounds. Most of the literature, however, tends to focus on Hispanics and other ethnic minority students who most often are viewed as at risk to excel academically given their educational attainment patterns; that is, they have lower persistence and completion rates from high school, even lower enrollment in college and completion of the associate and baccalaureate degrees. Most studies examine socioeconomic causes, citing economic, cultural, and educational disadvantages for the poor academic performance and early departure from high school or college of Hispanics (Astin, 1988; Cohen and Brawer, 1989).

The Effects of Labeling

Some of the literature examines student departure from college in depth (Bean, 1980; Tinto, 1975, 1987), but few studies critically define what causes college students to become "academically at-risk" until they finally leave the educational institution. Those studies that do look at student attrition (Astin, 1975, 1988; Rumberger, 1986; Ekstrom, Goertz, and Rock, 1988) focus on the dropout phenomenon itself, specifically that of underrepresented ethnic minority students, that is, Hispanics, African Americans, and Native Americans. An added impact of being labeled a dropout is that the students often are considered to be not only educationally disadvantaged but culturally disadvantaged as well. Unfortunately, among many teachers exists the perception that culturally disadvantaged students are less able to benefit academically from their education than their more culturally advantaged peers who exhibit more middle-class-like behaviors. The classroom outcomes are that teachers all too often have lowered expectations for these students with the result that they often become labeled as being academically at-risk to perform at even a minimum level of standards (Winfield, 1986).

For those who might dismiss such negative implications, Duran (1983) found that teachers use or build on the spoken contributions of Hispanic students 40 percent less than for white students, suggesting that the qualitative aspect of communication in the classroom is significantly less favorable for Hispanics. Additionally, the findings raise the possibility, according to Duran, that although students with low proficiency in English may

lead teachers to have lower expectations and esteem for Hispanic students, overall, "language proficiency in English per se among Mexican American students might not be solely responsible for quality of communication in classrooms" (p. 45). Low expectations by teachers in general result in labeling these students as low achievers and often leads to directing them to vocational or general tracks (Verdugo, 1983). The net effect for Hispanic students is that they are seen to be more at risk of failing and seldom are expected to succeed academically -- to complete high school, to enter college, to complete the associate degree at the community college and/or to transfer to a four-year institution and obtain a baccalaureate degree.

Defining Academically At-Risk

A specific definition of academically at-risk in higher education seems is conspicuously absent despite its widespread use in the literature and in contrast to the variety of definitions of and references to dropout, stopout and disadvantaged students in high school (Brickman, 1972; Levin, 1986; Rumberger, 1986; Ekstrom et al., 1988; Natriello, McDill, and Pallas, 1990). The K-12 literature clearly links these latter terms to low socioeconomic and/or ethnic minority status in almost every instance. According to the literature, disadvantaged students are academically at-risk of dropping out of school or changing their educational goals because of the conditions of poverty and race that keep them from achieving academic success and completing their goals.

Numerous reports (CPEC, 1989; Brint and Karabel, 1989; Rendon et al., 1988; Richardson and Bender, 1987; Olivas, 1986) focus not only on the high enrollment in community colleges and low enrollment of Hispanic students in four-year colleges, but also often highlight the glaring fact that Hispanics are often classified as most at-risk academically to stay in college and persist to degree completion. The lack of adequate and precise data through longitudinal studies makes it difficult to verify the at risk claims that are assumed to exist for this population. Nonetheless, studies which examine student attrition and drop out rates (Wehlage, Rutter, Smith, Lesko, and Fernandez, 1989; Ekstrom et al., 1988; Rumberger, 1986; Astin, 1975, 1988) denote general characteristics, such as low SES, race and ethnicity, single parent home, low parental support, transiency, and poor academic performance, as potential indicators of students who are academically at-risk to stay in an educational institution and complete a defined goal. Specifically, research has focused primarily on trying to understand the high drop out rates of the population most underrepresented in higher education, Hispanics, African Americans, and Native Americans.

Natriello, McDill, and Pallas (1990) surveyed the literature for definitions of disadvantaged, deprived, and at risk students. In tracing the historical development and

usage of these conceptual and operational definitions, the preference for using the term "disadvantaged" in all its connotation is overwhelming. The term "at risk" is contained within the parameters of "disadvantaged" and appears to connote various meanings to users of the terms. In its most basic meaning, according to Natriello et al. (1990, p. 24), one group of observers suggests that at risk students "may be more likely than others to experience problems in school," while another group defines at risk students as those not achieving educational goals including not graduating from high school.

What is brought out distinctly by Natriello et al. (1990) is that students who have identifiable at risk characteristics are at risk because of the result of an *interaction* between individual and environmental factors. That is, the at risk conditions are not due just to individual factors. Rather, these at risk characteristics become "problematic only in conjunction with events and conditions that have yet to unfold" (p. 25). In other words, at risk students "may be more likely to experience problems at some point in the future depending on a combination of in-school and out-of-school experiences and availability of resources" (p. 26). Thus, it is the disadvantages stemming from factors such as poverty, educational inadequacies, and linguistic differences most often located among ethnic minority groups, immigrants, non-English speakers, and economically disadvantaged populations (Levin, 1986) that lead to labeling students as educationally disadvantaged and at risk of fully benefiting from their educational experiences.

Borrowing from Epidemiology

The term at risk, according to Richardson, Casanova, Placier, and Guilfoyle (1989) as used in the epidemiological model to define the characteristics and conditions of individuals at risk of contracting certain diseases, has become analogous within education to define factors leading to success or failure for students. The purpose of epidemiological research, as Richardson et al. posit, is to find ways of identifying who in the general population is at risk for a medical condition that may be prevented or ameliorated. It should be kept in mind, however, "that risk is always *relative*" (p. 4) for everyone is at risk for one condition or another. Who is at risk and who is at greater risk is meaningful only when viewed in comparison to other individuals or subgroups. Thus, in educational research, certain students are identified as being at risk academically and more likely to fail in comparison to others who are identified as more likely to succeed academically because of the personal and family conditions prevailing in each group. As with proper medical care in the epidemiological model, intervening treatment from the school and/or a social agency can ameliorate the conditions and change the at-risk student's status and outcomes.

The At Risk Factors

Drawing from the literature, the following five variables were selected as potential indicators of at risk associated with Hispanics students in college. These factors can be reframed and considered as preconditions which the students may bring with them to the community college. It is important to stress that these factors were used in this study only to identify Hispanic students with *potentially* at risk academic status, to examine their academic progress toward transfer during their first-year of college, to determine if these preconditions create additional barriers for the students, and if so, how the students are able to succeed in spite of them. The at risk factors used in this study include: (1) ethnicity, (2) educational level of parents, (3) income level, (4) previous academic record, and (5) English language proficiency (see Appendix A).

Protective Factors Facilitating Academic Success

How do Hispanic students succeed academically despite the seemingly adverse personal conditions they may live in while pursuing their studies? Alvā (1988) examined factors leading to academic success among Mexican American high school students by using Garmezy's psychological concept of invulnerability. According to Garmezy (1983), children who live under major psychological and environmental disadvantages but are able to thrive under such stressful conditions have learned to be invulnerable and become resilient through the use of "protective factors" -- that is, factors which are "attributes of persons, environments, situations, and events that appear to temper predictions of psychopathology based upon an individual's at risk status" (p. 73).

Alva (1988) looked at how protective factors help vulnerable Mexican American students living in high stress situations succeed. Rather than looking at risk factors associated with academic failure, Alva focused on the coping resources students used to deal successfully with educational demands and challenges in high school. Protective factors "serve as a buffer to protect academically successful students from the detrimental effects of poverty and other conditions that place them in a 'disadvantaged' status" (p.6). These factors allow students to become academically less vulnerable and to develop resiliency to succeed where others might succumb to internal and/or external stresses and, thus, consist of both personal and environmental resources. Personal factors are internal sources that include the personality characteristics and attitudes individuals possess and use to mediate the effects of detrimental environmental circumstances. Environmental factors are external sources of information, support, and affective feedback, which aid individuals in adapting to their environment.

The Protective Factors

This study examined how and why Hispanic community college students who, though considered to be academically at-risk by the educational institution, are able to cope with high stress situations and conditions and succeed academically because of the effects of the protective factors operating within the context of their own personal situations. Five variables were used to examine the mediating role of protective factors leading to individual academic outcomes among Hispanic community college transfer students with potential at risk characteristics. In this study, personal factors include (1) positive self-concept, (2) strong locus of control, and (3) desire to improve oneself; environmental factors include (4) support in the home environment, and (5) formal and informal sources of support (see Appendix B).

lent Outcomes: Academic Progress Toward Transfer

Transfer has several definitions in the context of higher education. In this study, transfer refers to community college students who are completing their lower division requirements (approximately 60 semester credit units of transfer courses) and plan to transfer to a four-year institution with advanced standing (junior status) to do the upper division course work there toward their selected major for a bachelor's degree. The dependent variable, academic progress toward transfer, was measured in terms of a student's success in working toward completing some transfer requirements during the first year or college course work. Student transcripts were examined for completion of prerequisites or pre-transfer and transfer level courses with minimum "C" grades (2.0 GPA) or better and accumulating credit units toward transfer to a four-year institution.

The Conceptual Model

The framework presented here (Figure 1) summarizes the various factors which may interact to influence the academic progress toward transfer of Hispanic students with potential at risk characteristics. The variables in the conceptual model are organized under the following rubrics: preconditions, which Hispanic students may bring with them to the community college, protective factors that may facilitate their academic progress, and student outcomes, namely, the academic progress toward transfer of Hispanic students with potential at risk characteristics enrolled in their first year of college.

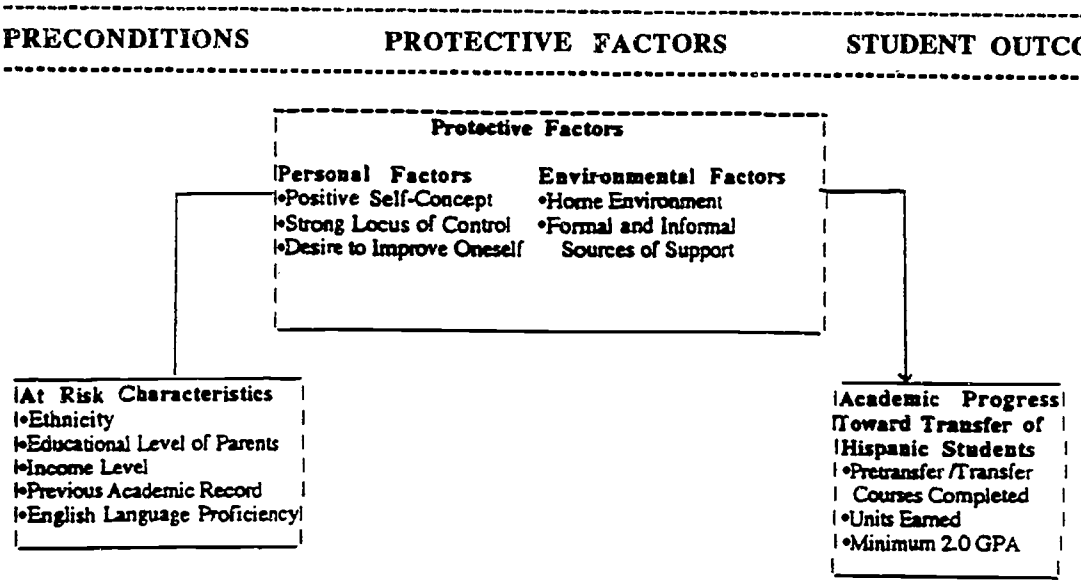

Figure 1: Conceptual Model of Protective Factors Leading to Academic Progress Toward Transfer of Hispanic Students with Potential At Risk Characteristics.

Research Design

This research represents a segment of a larger study which focused on an analysis of organizational and protective factors influencing the transfer of Hispanic students. Two mid-size community colleges in California with variation in their overall transfer rates, referred to here as High Transfer College and Low Transfer College, were the data collection sites. High Transfer College [HTC] has had a strong emphasis on the transfer mission since its founding in 1964 at the height of a rapid growth in community colleges nationally. Recently, HTC has had a surge of ethnic minority students enrolling in an otherwise predominantly white institution. Low Transfer College [LTC] was founded in the mid 1970s with primarily vocational programs from its sister college in order to attract its first students. Within ten years, more than 50 percent of LTC's student enrollment was culturally diverse. Only recently has LTC begun to focus more attention on the transfer function, partially in response to state incentives and reforms and partially in response to an increasing number of students expressing interest in transfer. Since 1988 both colleges have developed transfer centers in response to encouragement and funding from state level policy makers in the California legislature and the community college chancellor's office; hence, the transfer centers were assessed in terms of the students' awareness and use.

An earlier paper focused on cases studies of three individuals using the same measures (Laden, 1992). This paper presents the overall findings from the sample population of 136 first-year Hispanic students who enrolled in Fall 1991 with the declared

educational goal of transferring to a four-year institution. A survey questionnaire (Appendix C) was administered which measured the following categories of variables: five independent variables measured the preconditions (i.e., at risk characteristics) students may bring with them to the community college; five independent variables measured the protective factors (i.e., personal and environmental factors) students may use; and the dependent variable measured student outcomes, (i.e., academic progress toward transfer in their first year). Student transcripts for Fall 1991 and Spring 1992 also were analyzed to verify the students' self-report of their academic progress (i.e., pre-transfer and transfer courses, credit units earned, GPA).

Factor analysis was employed to validate the scales measuring the protective factors. Regression analysis was attempted but the sample population proved to be too small to yield meaningful results using this form of analysis. Descriptive statistics were used to derive frequency means for responses to each scale. Chi-square, a nonparametric technique, and ANOVA were used for between-group comparisons. Correlation analysis was used to measure the degree of relationship between variables, that is, the outcome measure, progress toward transfer, with awareness and use of the transfer center, with protective factors, and with various student characteristics. Since the index for progress toward transfer was on a four-point scale, the Spearman rank-order correlation coefficient was selected as the most appropriate statistical technique.

Results

This section presents the results from the survey questionnaire which examined whether Hispanic students' academic progress toward transfer differed between High Transfer College and Low Transfer College and the extent to which the academic progress of these students appeared to be related to at risk characteristics and protective factors. First, the results for the students in each college related to their academic progress at the end of their first year of college are given. Next, a discussion of the role of the transfer center and its relationship to the students' academic progress follows. Lastly, the findings related to individual characteristics and factors are presented.

Academic Progress Toward Transfer

The major dependent variable in the study was the academic progress toward transfer Hispanic students made during their first year at the community college. Progress was measured by using the completion of pre-transfer and transfer courses and units earned with passing grades of "C" or better or Credit (earned credit for a course with the equivalency of grade "C" or better) using a four-point scale (0=making no academic

progress; 1=making a little academic progress; 2=making some academic progress; 3=making definite academic progress).

Table 1: Academic Progress Toward Transfer by College

	COLLEGE			
	Low Transfer		High Transfer	
	N	%	N	%
None (0)	12	37.5	32	30.8
Little (1)	10	31.3	18	17.3
Some (2)	4	12.5	21	20.2
Definite (3)	6	18.8	33	31.7

The Hispanic students at HTC and LTC differed substantially in the academic progress toward transfer they made in their first year in college (Table 1). Hispanics at High Transfer College were making more academic progress at the end of the 1991-1992 academic year than their counterparts at Low Transfer College. For HTC students, 52 percent were making some to definite progress while only 31 percent of LTC students were making a comparable level of progress. When the mean ratings were compared between groups, a statistically significant difference was observed which highlights their differential patterns of progress. For HTC the mean was 1.53 (SD=1.23) while for LTC the mean was 1.12 (SD=1.13) ($t=1.73$; $p<.05$).

Awareness/Use of Transfer Center and Relationship to Academic Progress

The transfer center was included as a measure as a way to gage the commitment by the community college in improving its transfer function and increasing transfer rates, especially for Hispanics and other underrepresented students in light of the reforms and incentives emanating from policy makers at the state level. The transfer center symbolizes a top-down approach directed from the community college state chancellor's office to the local level to strengthen the transfer function and increase community college transfer rates, particularly for students underrepresented in the four-year institutions. It also demonstrates the community college's commitment to the transfer function. In order for students to benefit from the transfer center and for the community college to aid students to transfer as a result of the benefits of such a service, students have to know the transfer center exists and they have to use it. Therefore, a threefold attempt was made: to identify if Hispanic students were aware of the existence of the transfer center at their community college; if so, to determine if they were participating in the activities and making use of the transfer resources available to them; and, to assess the relationship between their awareness and use

of the transfer center and their academic progress toward transfer. Table 2 shows the summary of results for both awareness and use of the transfer center.

Awareness

Statistically significant differences were detected between students at HTC and LTC with respect to their awareness of the transfer center. The means observed on the awareness scale[3] were 3.03 for LTC students and 3.67 ($t=1.76$; $p<.05$) for HTC students. A closer examination of the six items comprising the awareness scale indicated that two items produced the most pronounced differences. One item (Item 6B) asked students if at least one counselor assisted transfer students at the college through the transfer center. At LTC 18.8 percent of the students answered affirmatively while at HTC double that or 37.5 percent answered affirmatively. Another item (Item 9A) asked students if a course or series of workshops on topics related to transfer were offered; 56.2 percent at LTC and 78.8 percent at HTC answered affirmatively.

Table 2: Transfer Center Awareness and Use by College

	COLLEGE						
	Low Transfer			High Transfer			
	N	MEAN	STD	N	MEAN	STD	t value
Awareness	32	3.03	1.73	104	3.67	1.82	1.76 *
Use	32	1.81	1.65	104	2.75	1.88	2.53 **

* $p < .05$
** $p < .01$

Use

For use of the transfer center,[4] means observed were 2.75 for HTC students and 1.81 for LTC students, indicating students at High Transfer College were using the transfer center much more than students at Low Transfer College ($t=2.53$; $p<.001$). More specifically, at HTC 10.6 percent of the students responded affirmatively to all six questions regarding use of the transfer center while no students at LTC responded affirmatively to these six questions. Approximately one-third of the HTC students indicated they had used most if not all of the offerings available in or through the transfer center compared to less than ten percent for LTC students. At the other extreme, 6.2

[3] Student awareness of the transfer center was measured by six yes/no responses (Items 5a, 5b, 6a, 6b, 9a, 10a). A comparison between HTC and LTC of the average number of "yes" and "no" responses for each item (range 0-6) was employed.

[4] Student use of the transfer center also was measured by six yes/no responses (Items 7a, 7b, 8a, 8b, 9b, 10b) regarding frequency of use and participation in activities. A similar comparison was employed as noted in the previous footnote.

percent students at LTC indicated they had not used the transfer center or used it only once. No students at HTC indicated either little or no use of the transfer center.

An examination of individual items revealed that two other items produced the most pronounced differences in usage of the transfer center. One item (Item 9B) asked students if they had taken a course and/or attended all or some of the workshops offered for transfer students by the college. At LTC 9.4 percent of the students and at HTC 42.3 percent of the students responded affirmatively. The other item (Item 10b) asked students if they had attended any of the activities and/or obtained any information on transfer offered by the transfer center. At LTC 28.1 percent of the students answered affirmatively compared with 51.0 percent at HTC.

The correlation between awareness and use of the transfer center was high for each site and statistically significant for both, with .47 ($p<.01$) for LTC and .51 ($p<.001$) for HTC, respectively.

Relationship to Academic Progress

Next, the relationships between transfer center awareness and use and making academic progress were examined (Table 3). The relationship between use of the transfer center and academic progress is statistically significant for LTC (.43; $p<.05$) but not for HTC. As might be anticipated, LTC students who made use of the transfer center were also making academic progress. This finding was not significant for HTC students where the majority were aware of and making use of the transfer center.

Table 3: Correlations between Transfer Center Scales and Progress

	COLLEGE	
	Low Transfer	High Transfer
Awareness	.21	-.05
Use	.43 *	.05

* p < .05 LTC N = 32
** p < .01 HTC N = 104

Individual Characteristics of Students

This portion considers whether Hispanic students at these two institutions had similar or different personal characteristics, at risk characteristics, and protective factors and whether any of these variables were related to their academic progress.

Personal characteristics included demographic information about the students (Table 4). Three measures of HTC and LTC students produced statistically significant differences between groups. First, nearly all students at HTC (96 percent) were in the

same age category of 16 to 24 years old as compared to three-fourths of LTC students (Chi Square=7.30; p<.01). Second, approximately two-thirds of the students at HTC were enrolled full-time compared to less than half at LTC (Chi Square=5.38; p<.05), which mirrored the LTC population as a whole. Third, LTC students were not only enrolled in fewer units, but were working more hours per week. At LTC 87.5 percent of the students were employed compared to 71.2 at HTC (Chi Square=3.88; p<.05).

Two of these variables, enrollment status and hours worked, were related to academic progress. The relationship of enrollment status to making academic progress was similar at the two institutions, with .44 (p<.05) for LTC and .34 (p<.001) for HTC. There was a negative correlation between the number of hours worked and the number of units enrolled in each semester. The correlation of hours worked per week as related to academic progress was -.12 for LTC and -.25 (p<.05) for HTC. Overall, HTC students were taking more units per term, working fewer hours per week, and making more academic progress than their peers at LTC.

Table 4: Profiles of Students by College

	COLLEGE				
	Low Transfer		High Transfer		
	N	%	N	%	Chi-Square
Commitment:					
Low	5	15.6	13	12.5	0.65
High	27	84.4	91	87.5	
Age:					
16-24	25	78.0	100	96.0	7.30**
Older	7	12.0	4	4.0	
Ethnicity:					
Mex. Am.	22	68.8	67	64.4	1.05
Other	10	31.2	37	35.6	
Gender:					
Female	14	43.7	61	58.7	2.20
Male	18	56.2	43	41.3	
Marital Stat.:					
Single	28	87.5	98	94.2	1.46
Married	4	12.5	6	5.8	
Units:					
< than 12	21	65.6	44	42.3	5.38*
> than 12	11	34.4	60	57.7	
Working:					
No	4	12.5	30	28.8	3.88
Yes	28	87.5	74	71.2	

* p < .05
** p < .01

At Risk Characteristics

Five characteristics were examined as preconditions Hispanic students may bring with them to the community college: ethnicity (including generational status), parental level of education, family income, previous academic record, and English language proficiency (Table 5).

Approximately two-thirds of the students at both colleges identified themselves as Mexican Americans, whereas the generational status they identified differed between the two groups. Nearly 80 percent of the LTC students and 43 percent of the HTC students were either first or second generation. On the other hand, the representation of third or more generation was 23 percent for LTC and more than double (57 percent) for HTC. Summary means are 1.86 for LTC and 2.3 for HTC (t=2.50; p<.01).

Parental level of education reflects the highest level of attainment for each parent, from completing less than sixth grade to having graduate or professional degrees. The average parental level of educational attainment was 2.84 for LTC and 4.04 for HTC (t=3.32; p<.01).

Table 5: At Risk Characteristics by College

	COLLEGE				
	Low Transfer		High Transfer		
	MEAN	STD	MEAN	STD	t value
Generation in U.S.	1.86	0.79	2.31	0.85	2.50**
Parents Education	2.84	1.57	4.04	1.84	3.32**
Income (Self) or Parents)	3.97	1.66	4.76	1.73	2.18*
Previous Acad. Record	5.68	1.08	5.62	1.32	0.21
English Proficiency	3.97	0.83	4.34	0.87	2.10*

* p < .05 LTC N = 32
** p < .01 HTC N = 104

Income level reflects combined income for parents and working students, with summary means of 3.97 for LTC and 4.76 for HTC (t=2.18; p<.05). Approximately 30 percent of LTC students and 10 percent of HTC students reported an income for themselves only and also reported working 30 to 40 hours per week. The reported parental income of $17,999 or less to determine eligibility for financial aid for a family of four was 38.9 percent for LTC and less than half with 17.6 percent for HTC. In contrast, 44.4 percent for LTC and 65.0 percent for HTC reported a parental income of $30,000 or more

indicating that almost half of LTC parents and two-thirds of HTC parents were not at the state low income (i.e., financial aid guidelines) or national poverty levels (i.e., $13,359, 1990 U.S. Census).

Previous academic record of students in all cases were self-reported high school grades. All students at HTC and all but four at LTC reported completing high school; the latter four completed the GED, instead. High school grades are generally used as a predictor of academic success in college; therefore, students were asked to indicate their high school grades from a list of eight choices (i.e., all "As", half "As" and half "Bs", all "Bs", and so forth). Frequency means reported were 5.68 for LTC and 5.62 for HTC, indicating relatively little difference in high school grades was evident between the two groups.

When the various items measuring English language proficiency were combined, the mean for LTC was 3.97 and the mean for HTC was 4.34 ($t=2.10$; $p<.05$). Overall, it appears that students at HTC were more advantaged in their English proficiency as compared to LTC students, perhaps due in part to their generational status.

Table 6 shows the correlation between the at risk characteristics and academic progress at each of the colleges. Three of the characteristics are unrelated to academic progress for both groups: generational status, parental education, and English proficiency. Two at risk characteristics, family income and previous academic record, were significantly related to academic progress; however, the relationships differed at HTC and LTC. Family income was significantly related (.53; $p<.01$) to academic progress at LTC. Previous academic record, on the other hand, was positively related to academic progress at HTC (.33; $p<.05$).

Table 6: Correlations of At-Risk Characteristics and Progress Toward Transfer

	COLLEGE	
	Low Transfer	High Transfer
Generation in U.S.	-.09	-.03
Parents Education	.00	-.06
Income (self or parents)	.53 **	.10
Previous Acad.Record	.00	.33 **
English Proficiency	.06	.01

* p < .05 LTC N = 32
** p < .01 HTC N = 104

The students also were split into two groups by college for each of the following variables: age (16-24 and less than 24); gender (male and female); parental education (less than high school completion and high school completion or more); hours worked (20 hours or less; more than 20 hours); and units enrolled (less than 12 units; 12 units or more). A series of two-way analysis of variance was conducted to estimate the effects of each of these variables, the colleges, and the interaction between the two. In all five analyses, students at HTC tended to show greater academic progress than students at LTC; however, the main effect of college never reached statistical significance. Only two statistically main effects were observed: enrollment status (Table 7) and hours worked (Table 8). These results were consistent with the Spearman correlational analysis.

Table 7: Student Academic Progress Toward Transfer by College and Enrollment.

	COLLEGE				
	Low Transfer		High Transfer		
	N	MEAN / STD	N	MEAN / STD	
Units:					
< than 12	21	0.9 / 1.0	44	1.1 / 1.1	
> than 12	11	1.6 / 1.2	60	1.9 / 1.2	

Source	DF	Anova SS	F Value	P-Value
College	1	3.99	3.01	0.0849
Units	1	23.43	17.69	0.0001**
Enrollment Status	1	0.00	0.00	1.0000

**P<.01

Table 8: Student Academic Progress Toward Transfer by College and Hours Worked.

	COLLEGE				
	Low Transfer		High Transfer		
	N	MEAN / STD	N	MEAN / STD	
Hrs Worked:					
< than 20	7	1.71 / 1.38	30	1.83 / 1.21	
> than 20	21	0.95 / 1.07	41	1.27 / 1.28	

Source	DF	Anova SS	F Value	P-Value
College	1	2.66	1.77	0.1860
Units	1	9.78	6.51	0.0123*
Enrollment Status	1	0.00	0.00	1.0000

*P<.05

Protective Factors

Protective factors were examined by two sets of measures, personal and environmental factors, to assess their roles in assisting Hispanic students to achieve academic progress toward transfer. Personal factors consisted of three variables, self-concept, desire to improve oneself, and locus of control; environmental factors consisted of two variables, home environment and formal and informal sources of support.

Personal Factors

With respect to the personal factors, there were no significant differences between the students at HTC and LTC (Table 9). The self-concept scale produced nearly identical means of 3.75 for LTC and 3.79 for HTC. Similarly, the means for desire to improve scale were 4.17 for LTC and 4.09 for HTC. The means for locus of control measure were 2.02 for both LTC and HTC. The students at both colleges appeared to have strong healthy self-concepts, a notable desire to improve, and a high internal locus of control.

There was only one statistically significant correlation between the personal factors and academic progress toward transfer. For HTC students the correlation between locus of control and academic progress was -.29 ($p<.05$), suggesting that HTC students related their academic efforts and subsequent success to internal attitudes more so than their counterparts at LTC.

Table 9: Personal Factors by College

	COLLEGE				
	Low Transfer		High Transfer		
	MEAN	STD	MEAN	STD	t value
Self Concept	3.75	0.58	3.79	0.59	0.32
Desire to Improve	4.17	0.63	4.09	0.81	0.61
Locus of Control	2.02	0.72	2.02	0.69	0.01

LTC N = 32
HTC N = 104

Environmental Factors

Home environment measured parental encouragement and support they give to their children to pursue higher education (Table 10). Summary means for both groups were identical with means of 4.38 for LTC and HTC, indicating students in both groups felt their home environment was favorable and supportive of their going to college.

Table 10: Environmental Factors by College

	COLLEGE				
	Low Transfer		High Transfer		
	MEAN	STD	MEAN	STD	t value
Home Environment	4.38	0.74	4.38	0.77	0.00
Family Support	1.09	1.09	1.63	1.28	2.16 *
Friends Support	2.25	1.34	2.01	1.33	0.89
Others Support	1.03	1.06	0.72	0.82	1.74

* p < .05 LTC N = 32
HTC N = 104

Formal and informal sources of support was measured by three items (Items 2, 3, 4) related to support, encouragement, and guidance students get as they pursue their educational goals. The support of family, friends, and others was selected most frequently by both groups. The means for parental support were 1.63 for HTC and 1.09 for LTC ($t=2.16$; $p.<05$), indicating LTC students turned less to their parents for support and guidance, perhaps given the lower educational attainment of the parents for this group. and a mean of 2.01 for HTC. The option of "other support" allowed students to write in who else provided them with support. This option produced a mean of 1.03 for LTC and a mean of 0.72 for HTC. Students specified counselors and teachers primarily , with 63.0 percent by LTC students and 49.5 percent by HTC students. Also selected were older siblings, 17.1 percent for LTC and 23.4 percent by HTC; and people at work, with 25.7 percent for LTC and 9.0 for HTC.

The sources of support for LTC students indicate they relied much more on formal sources of support within the college through teachers and counselors, and informal sources of friends, older siblings who have more experience, and individuals in the work place. Students at LTC may have sought encouragement and support from these sources since their parents' educational background indicates they may have been unable to provide advice regarding academic matters. Students at HTC, on the other hand, seemed to rely more on teachers and counselors within the organizational context for formal support and on their parents for informal support.

Examining the relationship between environmental factors and academic progress produced correlations with statistical significance for only two measures. The correlation of family support (including parents and siblings) and academic progress toward transfer

was -.53 ($p<.01$) for LTC and -.12 for HTC. Also, the correlation between support from friends (including classmates, friends, and co-workers) and academic progress was .45 ($p<.01$) for LTC and .10 for HTC. The results suggest that the support of family was less important in terms of guidance and problem solving while the support of friends was more important for LTC students who were making academic progress.[5]

Summary

The analyses of the variables point to several conclusions regarding HTC and LTC students and their academic progress toward transfer. The first conclusion evident is that students at High Transfer College made greater academic progress than students at Low Transfer College in their first year of college. Second, students at HTC had greater awareness of and made more use of the transfer center on their campus than students at LTC. Third, use of the transfer center appeared to contribute to students' academic progress at LTC. Fourth, there were a number of marked differences in the personal and at risk characteristics of the students at the two colleges. Some of these differences were associated with academic progress at both institutions, namely, enrollment status and hours worked. Fifth, the pattern of relationships between the individual characteristics of the students and their academic progress differed somewhat at the two colleges. At HTC academic progress was related to high school grades and locus of control, as well as enrollment status and hours worked while academic progress at LTC was related to income, enrollment status, hours worked, use of the transfer center, and reliance on support from friends.

A goal of this exploratory study was to use the results in the design of subsequent correlational and causal research on the effects of at risk characteristics and protective factors and to obtain a better understanding of how they are related to the academic progress of Hispanic transfer students. Moreover, the results and any future research may assist policy makers and designers in the conceptualization and implementation of program changes for Hispanics and other student groups with similar characteristics to further their academic progress along the higher educational pipeline.

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[5] It might be useful to think about the support measure as unidimensional, "Friends .....Family"; thus, these are not really two independent measures, but one. This is sometimes referred to as ipsative measurement. The only pattern for LTC students, given the limited data, is one where students who make more progress are also located more toward "Friends" end of the scales (implying they are located further away from the "Family" end).The use of two measures instead of only one allowed for other possibilities that have occurred. There was no correlation between parental education and support; however, it was found that LTC students who were making academic progress also reported friends rather than family as their primary source of support.

At Risk Characteristics

• *Ethnicity:* Students considered academically at-risk for completing their educational goals are more likely to be students from minority groups, especially first-generation. Racial and ethnic factors all too often are associated with socioeconomic status and educational attainment (Levin, 1986; Rumberger, 1986). Ethnic minority students from low SES backgrounds are identified as being more potentially at risk academically. In this study, Hispanic students are the target population, hence they are defined as "residents or citizens of the United States who are of Hispanic heritage" (Thesaurus of ERIC Descriptors, 1987, p. 108) as well as recently arrived immigrants, and those who identify themselves as Hispanic, Mexican, Mexican-American, Chicano, Latino, Puerto Rican, and nationals from Central America, South America or the Caribbean.

• *Educational Level of Parents:* Another indicator of potential at risk status for students is the educational level of parents, typically defined as being below the twelfth grade level (ACE, 1991). The level of parents' education denotes a level of knowledge of the educational system and an ability to understand and to assist their children to negotiate the educational process. The educational level also directly impacts the occupations parents have which in turn determine the family socioeconomic status (SES).

• *Income Level:* A low household income of $7,500 as a standard calculation for one individual, $15,000 for a family of two, and $1,000 additional per each family member is used generally as the guidelines by two-year institutions for determining if a student is eligible for support services and financial assistance through such programs as the Educational Opportunity Program and Services (EOPS), categorically funded by the California legislature to aid low-income community college students with additional assistance above and beyond the regular financial aid program.

• *Previous Academic Record:* Previous academic record tends to be related to educational performance. While average and below average grades may indicate a student's performance rather than actual ability, it is well documented that high school grades are still considered the best predictor of student success in college. Low reading level and lack of other basic skills, "C" or lower grades in high school are considered contributing factors to low academic performance (Astin, 1988).

• *English Language Proficiency:* The level of oral and written English communication skills used by a student is often used to denote language proficiency, academic integration and success in the educational system, especially if the student is from an ethnic minority group or an immigrant (Levin, 1986). If a student has a history of English as a Second Language and/or remedial English classes, it is often interpreted as an indicator that the student not only has weak English skills, but may have difficulty in other academic subjects due to these limited skills in English. Students proficient in English skills are, thus, more likely to successfully complete college-level classes in English and in other subjects and are more likely to complete their educational goals, including transferring from a two-year to a four-year college (Turner, 1988).

Protective Factors

Personal Factors

- *Positive Self-Concept:* Positive self-concept tends to be associated with an internal sense of self and an attitude about one's ability. As an individual grows into adulthood, the sense of self is associated with an increasing awareness of one's image and one's own worth as perceived by self and by others (Garmezy and Rutter, 1983; Natriello, 1987; Alva, 1988). Research shows that school dropouts are significantly more likely to have a lower self-concept than those who persist in their studies (Natriello, 1987), and that students' conceptions of themselves become more sharply differentiated after they enter college (Astin, 1975).

- *Strong Locus of Control:* Locus of control refers to either internal or external control. In this study, internal locus of control is used to refer to the belief that events are contingent on one's own behavior (Lazarus and Folkman, 1984). Strong locus of control is realized through the accepting of or developing one's own specific rules about behavior. It provides a structure for the individual in which the rules of behavior are applied (Werner and Smith, 1982). Structure and rules lead to stability, thereby, providing greater internal self control over one's behavior.

- *Desire to Improve Oneself:* Desire to improve oneself refers to the high motivational attitude an individual has about his or her future. It is often the strong desire to improve oneself that leads the individual to define and clarify career possibilities early in life (Werner and Smith, 1982), and education as a route toward bettering one's life situation.

Environmental Factors

- *Support in Home Environment:* Social class, father's occupation, and parents' education are most often used as indicators of the home environment. The intent here is to measure the influence of the home on the student's achievement. In measuring support in the home environment, I thus define it as what parents do to create an educationally stimulating environment in the home or to otherwise encourage, motivate, and emotionally provide for their son or daughter.

- *Formal and Informal Sources of Support:* Formal and informal sources of support can come from a great number of sources to aid the individual. I define this variable to include friends, siblings, cousins and other relatives; older friends, older relatives and parents of friends; and other individuals in the community, church, as well as college setting, who can be primary sources providing emotional, intellectual, and personal guidance to the individual through either or both their formal and informal positions.

YOU AND YOUR COMMUNITY COLLEGE

Please answer the following questions by circling the appropriate number that best fits your response to each question. Circle ONE number or response only unless otherwise indicated. Thank you.

SECTION I

The following questions are about how you get information to make personal decisions related to being a college student. This section also includes questions about college programs and services that provide students with information and assistance.

1. What is the most important reason you are attending this community college at this time? (Circle ONE number only)

1 To prepare for transfer to a four-year college or university
2 To gain skills necessary to enter a new job or occupation
3 To gain skills necessary to retrain, remain current, or advance in a current job or occupation
4 To satisfy a personal interest (cultural, social)
5 To improve my English, reading, or math skills

2. Who do you ask for help or information on something related to college? (Circle up to three most important sources you would turn to for information.)

1 Friend(s)
2 Classmate(s)
3 People I work with
4 Parent(s)
5 Brother or Sister
6 A Relative
7 Other (Please specify)_____
8 No one

3. When you have a personal problem related to college, who do you most often go to for assistance in solving that problem? (Circle ONE number only)

1 Friend(s)
2 Classmate(s)
3 People I work with
4 Parent(s)
5 Brother or Sister
6 A Relative
7 Other (Please specify)_____
8 No one

4. Who generally provides the most encouragement and support to you about staying in college, especially at times when you're feeling low or uncertain it's the right thing for you to be doing? (Circle ONE number only)

1 Friend(s)
2 Classmate(s)
3 People I work with
4 Parent(s)
5 Brother or Sister
6 A Relative
7 Other (Please specify)_____
8 No one

In questions 5 to 10, please circle ONE number only in part A. If directed to part B, also circle ONE number only.

5. A. Is there a transfer center at your community college?

1 Yes (Please answer part B)
2 No
3 Do not know

B. If yes, is there at least one individual present at the transfer center to assist students during normal college hours?

1 Yes
2 No
3 Do not know

6. A. Is there at least one counselor at your community college who works primarily with transfer students?

1 Yes (Please answer part B)
2 No
3 Do not know

B. If yes, does at least one counselor assist transfer students at your community college through the transfer center?

1 Yes
2 No
3 Do not know

7. A. Do you use the transfer center at your community college?

1 Yes (Please answer part B)
2 No
3 There is no transfer center at this community college.

B. If yes, how often do you use the transfer center at your community college?

1 At least once a week
2 At least once a month
3 Occasionally
4 Rarely
5 Never

8. A. Have you seen a counselor regarding your educational goal and for information and assistance with transfer?

1 Yes (Please answer part B)
2 No

B. If yes, how often have you met with a counselor to discuss your educational plan and for information and assistance with transfer?

1 Once during this academic year
2 Twice during this academic year
3 At least three times during this academic year
4 At least once but I don't remember when
5 Never

9. A. Does your community college offer a course(s) and/or series of workshops on college orientation, career guidance, and study skills specifically for students interested in transferring to a university?

1 Yes (Please answer part B)
2 No
3 Do not know

B. If yes, have you taken the course(s) and/or attended all or some of the workshops?

1 Yes
2 No

10. A. Does your community college offer any of the following related to transfer: brochures, pamphlets, and other printed materials on transfer; general information, workshops, and activities about different colleges and universities; guaranteed transfer admissions agreements, assistance on how to fill out college applications, tours to nearby universities, and so forth?

1 Yes (Please answer part B)
2 No
3 Do not know

B. If yes, have you attended any of the activities offered or obtained any of the information on transfer?

1 Yes
2 No

11. Have you obtained at least one Transfer Admissions Agreement (TAA) with a four-year college or university as part of your transfer preparation?

1 Yes
2 Not eligible yet per TAA guidelines for college/university I want
3 Not know about TAA
4 Not available for the college/university I want
5 Do not plan to get one.

SECTION II

In this section, we present some statements which we ask you to consider how you feel about them. How much do you agree or disagree with each of the following statements about yourself? (Circle ONE number for EACH statement only)

12. Going to college is very important to me

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

13. The lowest level of education I would be satisfied with is finishing college with a bachelor's degree (BA/BS degree).

Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
5	4	3	2	1

14. I find it hard to keep my mind on a task or a job when something is bothering me.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree.
1	2	3	4	5

15. When I have a question about my major or the transfer process, I am able to talk to an instructor or a counselor about it.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
5	4	3	2	1

16. I am able to do things as well as most other people.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

17. I nearly always feel sure of myself even when people disagree with me.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

18. I take a positive attitude toward myself.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

19 I feel I am a person of worth, on an equal plane with others.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 -1

20. On the whole, I am satisfied with myself.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

21. Students like myself are very likely to transfer to a four-year college or university as a result of attending this community college.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

22. Good luck is more important than hard work for success.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

23. Planning only makes a person unhappy, since plans hardly ever work out anyway.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

CONTINUE ON TO NEXT PAGE

24. People who accept their condition in life are happier than those who try to change things.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

25. Every time I try to get ahead, something or somebody stops me.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

26. My family encourages me to go to college.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

27. My parents value education highly.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

28. My parents insist I try never to miss classes.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

29. My parents encourage me to study hard.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

30. My parents care about my education.

Strongly Agree.....Agree.....Undecided.....Disagree.....Strongly Disagree
5 4 3 2 1

SECTION III

This section asks you to tell us about your course work at this community college -- i.e., the college courses and units you are taking and your grades. (Circle ONE number for EACH course you enter)

CONTINUE ON TO NEXT PAGE

31. Please list all the courses and their unit values you are taking this semester (Circle ONE number for EACH course listed regarding transfer)

Course	Units	Is this a Transfer Requirement? Yes	No	Don't Know
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3

32. If you were enrolled here last semester or only in the summer, please list all the courses and their unit values you enrolled in. (Circle ONE number for EACH course listed regarding transfer)

Course	Units	Grade	Is this a Transfer Requirement? Yes	No	Don't Know
_____			1	2	3
_____			1	2	3
_____			1	2	3
_____			1	2	3
_____			1	2	3
_____			1	2	3

33. Please list all the courses and their unit values you plan to take next semester. (Circle ONE number for EACH course listed regarding transfer)

Course	Units	Is this a Transfer Requirement? Yes	No	Don't Know
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3
_____		1	2	3

34. Which of the following best describes your grades at this community college? (Circle ONE number only)

Mostly As (numerical average of 90-100).....1
About half As and half Bs (85-89).....2
Mostly Bs 80-84).....3
About half Bs and half Cs (75-79).....4
Mostly Cs (70-74).....5
About half Cs and half Ds (65-69).....6
Mostly Ds (60-64).....7
Mostly below D (below 60).....8

SECTION IV

In this section we ask you a few questions about yourself and your family.

35. What is the highest level of education your parents [stepparent(s) or guardian(s)] completed? (Circle ONE number only for EACH parent)

Mother or Female Guardian	Father or Male Guardian	
1	1	6th grade or less
2	2	7th grade to less than 12th grade
3	3	High school graduation only
4	4	Vocational, trade, business school
5	5	Less than two years of college
6	6	Two or more years of college (including AA/AS degree)
7	7	Finished college (BA/BS degree)
8	8	Master's degree or equivalent
9	9	Ph.D, M.D., or other advanced professional degree
10	10	Don't know

36. Total annual income (Please answer A or B ONLY)

A. If you live at home, what is the total annual family income in your parents' household? (Circle ONE number only)

1.....$5,999 or below
2.....$6,000 to $11,999
3.....$12,000 to $17,999
4.....$18,000 to $23,999
5.....$24,000 to $29,999
6.....$30,000 or more

B. If you live alone, what is your total annual income? (Circle ONE number only)

1.....$5,999 or below
2.....$6,000 to $11,999
3.....$12,000 to $17,999
4.....$18,000 to $23,999
5.....$24,000 to $29,999
6.....$30,000 or more

37. Do you speak English as your primary language?

Always	Most of the Time	Some of the Time	Rarely	Never
5	4	3	2	1

38. Is English the primary language spoken in your home?

Always	Most of the Time	Some of the Time	Rarely	Never
5	4	3	2	1

39. Did you take any of the following kinds of English courses in high school? (Circle ONE for EACH line)

Course	Yes	No	Don't know
English as a Second Language (ESL)	1	2	3
Remedial English	1	2	3

40. Have you taken or are you now taking any of the following kinds of English courses at this community college? (Circle ONE for EACH line)

Course	Yes	No	Don't know
English as a Second Language (ESL)	1	2	3
Remedial English	1	2	3

CONTINUE ON THE NEXT PAGE

41. From 9th grade through 12th grade, how many of the following courses did you take? (Mark EACH line under number of years you took EACH subject)

	0 None	1/2 Year	1 Year	1 1/2 Years	2 Years	2 1/2 Years	3 Years	3 1/2 Years	4 Years
Math: Algebra.....1	1	1	1	1	1	1	1	1	1
Geometry.....2	2	2	2	2	2	2	2	2	2
Trigonometry.....3	3	3	3	3	3	3	3	3	3
Calculus.....4	4	4	4	4	4	4	4	4	4
English or Literature.....5	5	5	5	5	5	5	5	5	5
Foreign Language.....6	6	6	6	6	6	6	6	6	6
History or Social Studies.....7	7	7	7	7	7	7	7	7	7
Science: Biology..... 8	8	8	8	8	8	8	8	8	8
Chemistry.....9	9	9	9	9	9	9	9	9	9
Physics.....10	10	10	10	10	10	10	10	10	10
Fine Arts 11	11	11	11	11	11	11	11	11	11

42. Which of the following best describes your grades in high school? (Circle ONE only)

Mostly As (numerical average of 90-100).....1
About half As and half Bs (85-89).....2
Mostly Bs (80-84).....3
About half Bs and half Cs (75-79).....4
Mostly Cs (70-74).....5
About half Cs and half Ds (65-69).....6
Mostly Ds (60-64).....7
Mostly below D (below 60).....8

SECTION V

In this section, we want to know a little about you personally. (Circle ONE number for EACH question)

43. Age

1 16-17 years old
2 18-19
3 20-22
4 23-25
5 26-27
6 28-30
7 31 or older

44. Sex

1 Male
2 Female

CONTINUE ON THE NEXT PAGE

45. What is your racial or ethnic identification?

1 American Indian
2 Asian, Pacific Islander
Please be more specific (e.g., Chinese): _____
Generation in the United States (Circle ONE that applies to you):
First Second Third Fourth Fifth or More
3 Black, African-American
4 Hispanic, Latino
Please be more specific (e.g., Puerto Rican): _____
Generation in the United States (Circle ONE that applies to you):
First Second Third Fourth Fifth or More
5 White
6 Other (Please specify)_____

46. What is your educational major? (Please specify)_____

47. How many units are you taking this term?

1 less than 6 units
2 6-8 units
3 9-11 units
4 12-15 units
5 More than 15 units

48. Including the units you are now taking, what is the total number of course units you have taken at this community college?

1 1-15 units
2 16-30 units
3 31-45 units
4 46 or more units

49. What is the highest diploma/degree you hold currently?

1 High School Diploma
2 High School Equivalency Diploma
3 General Education Diploma (GED)
4 Other (specify)_____
5 None

50. Are you employed?

1 Yes If yes, how many hours do you work per week?_____
2 No

51. Are you married?

1 Yes
2 No

THANK YOU VERY MUCH!

References

Alva, Sylvia Alatorre. (1988). Academic Invulnerability Among Mexican American High School Students: A Multivariate Study. Unpublished Ph.D. dissertation. Los Angeles: University of California.

Astin, Alexander W. (1975). Preventing Students from Dropping Out. San Francisco: Jossey-Bass Publishers.

_____. (1988). Minorities in American Higher Education. San Francisco: Jossey-Bass Publishers.

Astin, Helena S. , and Burciaga, Cecilia P. (1982). Chicanos in American Higher Education: A Summary of Findings and Recommendations. Los Angeles: Higher Education Research Institute.

Bean, John. (1980) "Dropout and Turnover: The Synthesis and Test of A Causal Model of Student Attrition." Research in Higher Education. Vol. 12, No. 2, 155-187.

Bean, John, and Metzner, Barbara S. (1985) "A Conceptual Model of Nontraditional Undergraduate Student Attrition." Review of Educational Research, Winter 1985, Vol. 55, No. 4, 485-540.

Bray, Dorothy. (1984). Remediation, Retention, Rigor and Reform--The New 3 Rs Plus One. Paper presented at meeting of Northern Adult Education Association and the Washington Association of Developmental Education. Seattle, Washington, April 27.

Brickman, William W. (1972). Education and the Many Faces of the Disadvantaged: Cultural and Historical Perspectives. New York: Wiley Press.

Brint, Steven, and Karabel, Jerome. (1989). The Diverted Dream. New York: Oxford University Press.

Brown, Shirley Vinning. (Forthcoming, 1994). Profiles of Persistence: U.S. Minority PhDs: 1975-1980. Princeton: Educational Testing Service

California Community Colleges. (1986). Updating the Board's 1984 Plan for Implementing Matriculation. Sacramento: Board of Governors of the California Community Colleges. October 30-31.

_____. (1987). Student Matriculation: A Plan for Implementation. Sacramento: Board of Governors of the California Community Colleges.

California Community Colleges. (1986) Policy Statement on the Enrollment, Retention and Transfer of Minority Students. Sacramento: California Community Colleges Chancellor's Office, July 1986.

_____. (1988). Transfer Centers. Sacramento: California Community Colleges Chancellor's Office.

_____. (1989). Community College Transfer Performance. Sacramento: California Community Colleges Chancellor's Office, September 1989.

_____. (1989). Programs and Practices that Facilitate the Transfer of Underrepresented Ethnic Minority Students. Sacramento: California Community Colleges Chancellor's Office.

_____. (1989). Community College Transfer Performance. Sacramento: California Community Colleges Chancellor's Office.

_____. (1990). A Plan for Implementing Transfer Centers. California Community Colleges Chancellor's Office, October 1990.

_____. (1991). Transfer Program: Minimum Standards for Transfer Centers. California Community Colleges Chancellor's Office, July 1991.

_____. (1991). Transfer: A Plan for the Future. California Community Colleges Chancellor's Office, November, 1991.

California Postsecondary Education Commission. (1987). Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities: Progress Since 1985 and Suggestions for the Future. Sacramento: California Postsecondary Education Commission, Report 87-41.

_____. (1988). Update of Community College Transfer Student Statistics Fall 1987. Sacramento: California Postsecondary Education Commission, Report 88-15.

_____. (1989). Update of Community College Transfer Student Statistics 1988-89. Sacramento: California Postsecondary Education Commission, Report 89-23.

_____. (1989). College-Going Rates Fall 1988 Update. Sacramento: California Postsecondary Education Commission, Report 89-24.

_____. (1990). Student Profiles 1990. Sacramento: California Postsecondary Education Commission, Report 90-23.

_____. (1990). Transfer and Articulation in the 1990s: California in the Larger Picture. Sacramento: California Postsecondary Commission, Report 90-30.

_____. (1991). Update of Community College Transfer Student Statistics Fall 1990 and Full-Year 1989-90. Sacramento: California Postsecondary Education Commission, Report 91-11.

_____. (1992). Student Profiles 1991. Sacramento: California Postsecondary Education Commission, Report 92-10.

Carter, Deborah J. and Wilson, Reginald (1990). Eighth Annual Report on the Status on Minorities in Higher Education. Washington: Office of Minority Concerns.

_____. (1991) Ninth Annual Report on the Status on Minorities in Higher Education. Washington: Office of Minority Concerns.

Chronicle of Higher Education. (1988). "Community Colleges Urged to Make a Greater Effort to Prepare the Disadvantaged for Higher Education, " Vol. 34, No. 33. April 27, A-1.

_____. (1989). "The States: California", Almanac. September 6, 32-33.

_____. (1990). "2-Year Institutions Under Pressure to Ease Transfers," Vol. 36, No. 21. February 7, A-1.

Clark, Burton R. (1960). "The 'Cooling Out' Function in Higher Education." American Journal of Sociology. Vol. 65, No. 6, 569-576.

_____. (1960b). The Open Door College: A Case Study. New York: McGraw-Hill Book Company, Inc.

Clewell, Beatriz Chu, and Joy, Myra F. (1986). Improving Minority Retention in Higher Education: A Search for Effective Institutional Practices. Princeton: Educational Testing Service.

Cohen, Arthur M. (1988). "Degree Achievement by Minorities in Community Colleges." Review of Higher Education, Vol. 11, No. 4, 383-402.

Cohen, Arthur M. , and Brawer, Florence. (1982). The American Community College. San Francisco: Jossey-Bass Publishers.

_____. (1987). The Collegiate Function of Community Colleges. San Francisco: Jossey-Bass Publishers.

_____. (1989). The American Community College. Second Edition. San Francisco: Jossey-Bass Publishers.

Cohen, Arthur, Brawer, Florence, and Bensimon, Estela. (1985). Transfer Education in American Community Colleges: Report to the Ford Foundation. Los Angeles: Center for the Study of Community Colleges, University of California.

Commission for the Review of the Master Plan for Higher Education. The Challenge of Change. Sacramento: March 1986.

_____. The Master Plan Renewed. Sacramento: July 1987.

Commission on Minority Participation in Education and American Life. (1988). One-Third of a Nation. Washington, D.C.: American Council on Education and Education Commission of the States.

Department of Finance. (1992) California Statistical Abstract. Sacramento: Department of Finance.

Duran, Richard P. (1983). Hispanics' Education and Background Predictors of College Achievement. New York: College Entrance Examination Board.

Educational Resources Information Center. (1987). Thesaurus of ERIC Descriptors. Phoenix: Oryx Press.

Educational Testing Service. (1990). "ETS Policy Notes." ETS Policy Information Center, Princeton: Educational Testing Service, Vol. 3, No. 1 (Winter).

Educational Record. " Minorities in the Education Pipeline: The Unfinished Agenda." Special Double Issue. Vol. 68, No. 4, (Fall 1987/Winter 1988).

Ekstrom, Ruth B., Goertz, Margaret E., and Rock, Donald A. (1988) Education and American Youth. London: The Falmer Press.

El-Khawas, Elaine, Carter, Deborah J., and Ottinger, Cecilia A. (1988). Community College Fact Book. New York: American Association of Community and Junior Colleges and Macmillan Publishing Company.

Garmezy, Norman. (1983). Stress, Coping and Development in Children. New York: McGraw-Hill.

Garmezy, Norman, and Rutter, Michael. (1983). Stress, Coping and Development in Children. (Eds.) New York: McGraw-Hill Book Company.

Grubb, W. Norman. (1991). "The Decline of Community College Transfer Rates." Journal of Higher Education, Vol. 62, No. 2 (March/April 1991), 194-221.

Karabel, Jerome. (1972) "Community College and Social Stratification", Harvard Educational Review Vol. 42, No. 4, November, 521-562.

Laden, Berta Vigil. (1992). "Protective Factors Affecting Hispanic At-Risk Students in Community College Transfer Programs." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Lazarus, Richard S., and Folkman, Susan. (1984). Stress, Appraisal, and Coping. New York: Springer Publications.

Lee, Valerie E.. (1985). Access to Higher Education: The Experiences of Blacks, Hispanics, and Low Socioeconomic Status Whites. Division of Policy Analysis and Research, Washington, DC: American Council on Education.

Lee, Valerie E., and Frank, Kenneth A. (1990). "Student Characteristics Which Facilitate the Transfer from Two-Year to Four-Year College." Sociology of Education, Vol. 63, No. 3 (July 1990), 178-193.

Levin, Henry M. (1986). Educational Reform for Disadvantaged Students: An Emerging Crisis. West Haven: National Education Association.

_____. (1989). "Accelerated Schools: A New Strategy for At-Risk Students." Policy Bulletin No. 6. Bloomington: Consortium on Educational Policy Studies, May 1989.

McCool, A. C. (1984). "Factors Influencing Hispanic Student Retention within the Community College." Community/Junior College Quarterly, Vol. 8, 19-37.

Natriello, Gary. (Ed.) (1987). School Dropouts. New York: Teachers College Press.

Natriello, Gary, McDill, Edward L., and Pallas, Aaron M. (1990). Schooling and the Disadvantaged. New York: Teachers College Press.

Nora, Amaury. (1987). "Determinants of Retention Among Chicano College Students: A Structural Model." Research in Higher Education, Vol. 26, No. 1, 31-59.

_____. (1990). "Campus-based Aid Programs as Determinants of Retention among Hispanic Community College Students." Journal of Higher Education, Vol. 61, No. 3 (May/June 1990), 312-331.

Nora, Amaury, and Rendon, Laura I. (1988). "Hispanic Students: Stopping the Leaks in the Pipeline." Educational Record, Vol. 68, No. 4 (Fall-Winter 1987-88) 79-85.

_____. (1990). "Determinants of Predisposition to Transfer Among Community College Students: A Structural Model." Research in Higher Education, Vol. 31, No. 3, 235-255.

Olivas, Michael A. (1978). The Dilemma of Access. Washington, DC: Howard University Press.

_____. (Ed.). (1986). Latino College Students. New York: Teachers College Press.

Ortiz, Vilma. (1986). "Generational Status, Family Background, and Educational Attainment Among Hispanic Youth and Non-Hispanic White Youth," in Latino College Students (Ed.) Olivas, Michael A.

Pascarella, Ernest T. (1980) "Student-Faculty Informal Contact and College Outcomes." Review of Educational Research, Vol. 50, 545-595.

Pascarella, Ernest T., and Terenzini, Patrick T. (1991) How College Affects Students. San Francisco: Jossey-Bass Publishers.

Pincus, Fred. L., and DeCamp, Suzanne. (1989). "Minority Community College Students Who Transfer to Four-Year Colleges: A Study of a Matched Sample of B.A. Recipients and Non-Recipients." Community/Junior College, Vol. 13, 149-156.

Rendon, Laura I. (1982). Chicanos in South Texas Community Colleges: A Study of Student and Institutional-Related Determinants of Educational Outcomes. Unpublished Ph. D. dissertation. University of Michigan.

_____. (1986). "The Demographic Imperative: Responding to New Students in Postsecondary Education." Keynote address at conference Affirmative Action at the Crossroads: A Manifest for Change. San Jose: September 26-27.

_____. (1992). "From the Barrio to the Academy: Revelations of a Mexican American Scholarship Girl." First Generation Students: Confronting the Cultural Issues: New Directions for Community Colleges. (Eds.) London, Howard, and Zwerling, Steven. San Francisco: Jossey-Bass Publishers.

_____ ___. (1993). "Paper Presentations: Experiences of Community College Students." Oral comments made in session at the annual meeting of the Association for the Study of Higher Education, Pittsburg.

Rendon, Laura I., and Mathews, Terri B. (1989) "Success of Community College Students." Education and Urban Society. Vol. 21, No. 3, 312-327.

Rendon, Laura I., Justiz, Manuel J., and Resta, Paul. (1988) "Transfer Education on Southwest Border Community Colleges." New York: The Ford Foundation.

Rendon, Laura I., and Nora, Amaury. (1992) "A Synthesis and Application of Research on Hispanic Students in Community Colleges." Community College Review. Vol. 17, No. 1, 17-24.

Richardson, Richard C., Jr., and Bender, Louis W. (1987). Fostering Minority Access and Achievement in Higher Education. San Francisco: Jossey-Bass Publishers.

Richardson, Richard C., Jr., and Skinner, Elizabeth. (1992) "Helping First Generation Students." First Generation Students: Confronting the Cultural Issues: New Directions for Community Colleges. (Eds.) London, Howard, and Zwerling, Steven. San Francisco: Jossey-Bass Publishers.

Richardson, Virginia, Casanova, Ursula, Placier, Peggy, and Guilfoyle, Karen. (1989). School Children At-Risk. London: The Falmer Press.

Rumberger, Russell W. (1986). High School Dropouts: A Problem for Research, Policy, and Practice. Stanford: Stanford Education Policy Institute, School of Education.

Savage, David G. (1985) "Community College Plight." California Journal. Vol. 16 (July 1985), 275-277.

Tinto, Vincent. (1975). "Dropout from Higher Education: A Theoretical Systhesis of Recent Reseach." Review of Educational Research. Vol. 45, 89-125.

_____. (1987). Leaving College. Chicago: The University of Chicago Press.

Turner, Caroline Sotello Viernes. (1988). Organizational Determinants of the Transfer of Hispanic Students from Two- to Four-Year Colleges. Unpublished Ph.D. dissertation. Stanford: Stanford University.

U.S. Department of Commerce. (1992). Statistical Abstract of the United States 1992 112th Edition. Washington, DC: U.S. Department of Commerce.

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

Werner, Emmy, and Smith, Ruth. (1982). Vulnerable But Invincible. New York: McGraw-Hill Book Company.

Winfield, Linda F. (1986). "Teacher Beliefs toward Academically At Risk Students in Inner Urban Schools." The Urban Review, Vol 18, No. 4, 253-268.