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**FROM DIVERSITY TO EDUCATIONAL EQUITY:  
A Discussion of Academic Integration and  
Issues Facing Underprepared UCSC Students**

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**ABSTRACT**

While the positive effects generated by student-faculty interaction associated with multiple student outcomes are well-documented, little is known about how various student subgroups experience student-faculty interaction differently. Among studies that have investigated this issue, some demonstrate that the levels and effects of student-faculty interaction may differ by student gender, race, and major field. The current project improves our understanding of the conditional effects of student-faculty interaction by examining different patterns of student-faculty interaction for various student subgroups, as well as their implications for higher education theory and practice. Specifically, it seeks to answer the questions: 1) How does the level of student-faculty interaction vary by student gender, race, SES, 1st generation status, and major field? 2) How does the student satisfaction with faculty contact vary by these student characteristics? 3) How does the relationship between student-faculty interaction and student educational outcomes vary by these student characteristics?

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As the most prestigious public institution of higher education in the State of California, the University of California system is expected to offer admission to approximately 12.5% of California high school graduates each year. These students are recognized as having demonstrated the highest level of academic achievement of all of the California high school graduates. Although the eligibility criteria are established on a system-wide basis, each UC campus develops selection strategies for admitting eligible students. For most students, receiving an offer of admission to a UC campus implies recognition of their academic achievement and the key to continued academic and personal success. But, does this economically, ethnically, socially, and intellectually diverse group of high-achieving students experience equal educational opportunity on a UC campus?

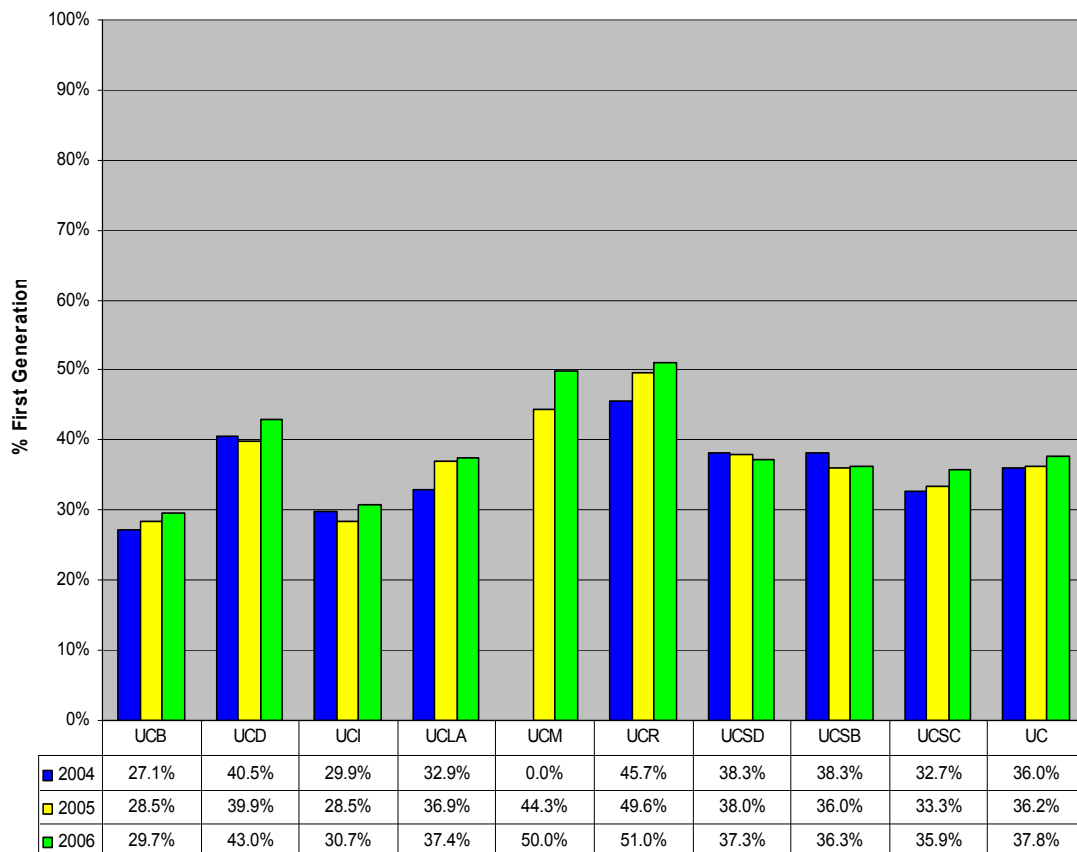
This question assumes that equal educational opportunity will increase students' access to academic excellence, thus minimizing the differences in measurable educational outcomes (course grades, Grade Point Averages, Graduation Rates, etc.) correlated

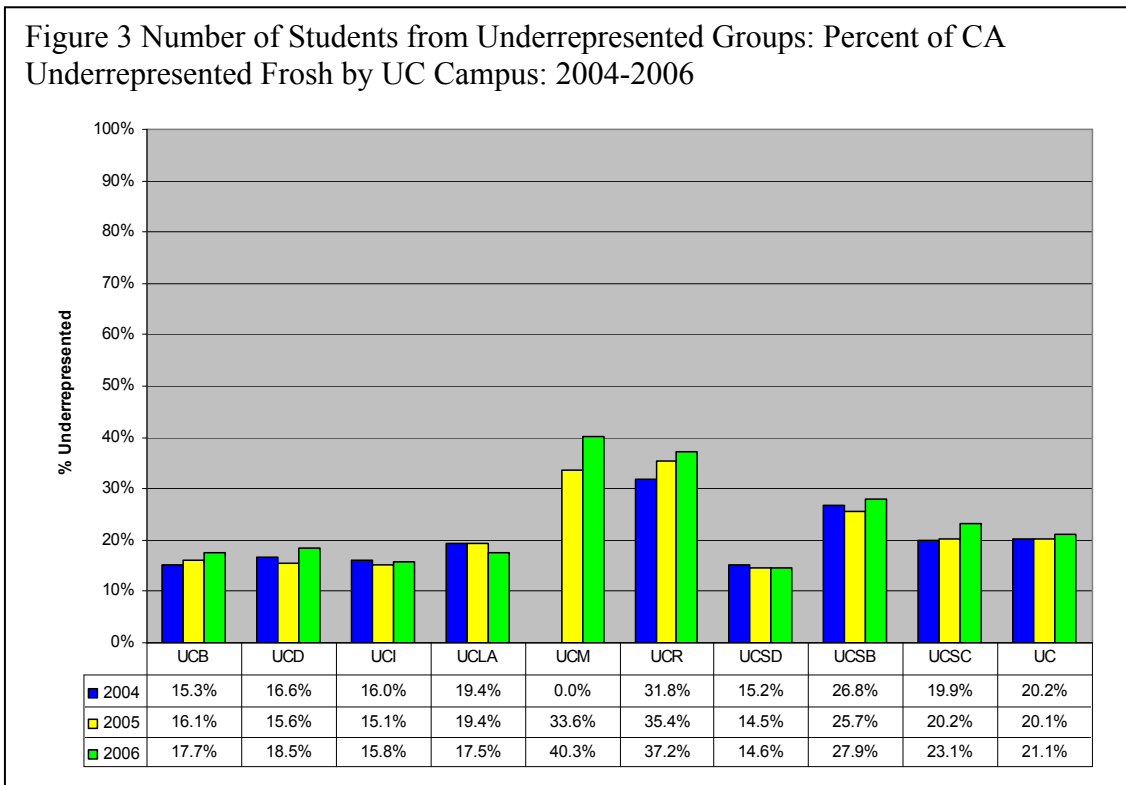
with students socio-economic, educational, and/or ethnic backgrounds. Using the University of California Santa Cruz as a case study, this paper analyzes the apparent patterns of academic achievement among students from varied socio-economic and ethnic backgrounds in order to raise questions and concerns pertinent to issues of educational equity.

**UCSC Admissions, Graduation and Retention Trends**

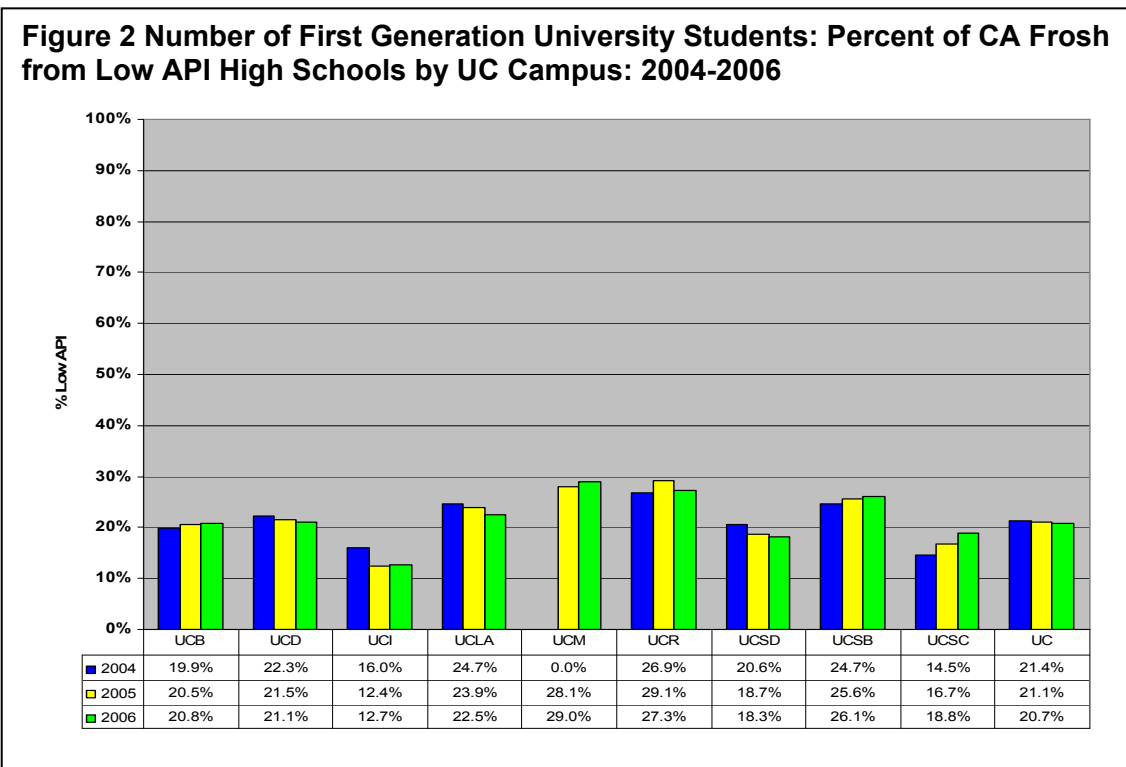
The admissions policies and procedures as established by the Committee on Admissions and Financial Aid (CAFA) at the University of California Santa Cruz effectively support the importance of admitting and yielding a diverse student population. All of the admitted students meet UC eligibility criteria except approximately 120 (4%) who are “admit by exception” students from disadvantaged backgrounds. Each year an increasing number of students from high schools rated at the mid to low levels of the high school Academic Performance Index accept their offers of admission from UCSC, as do an increasing number of first-generation university students and students from underrepresented groups.

**Figure 1 Number of Students from low performing high schools: Percent of CA First Generation College Fresh by UC Campus: Fall 2004-2006**





The campus community is enriched by the diverse socio-economic, ethnic, and educational interests of its students. However, it is important to consider to what degree



the campus is satisfactorily addressing the academic needs of this diverse student body such that all students are assisted to maximize their academic potential and achieve their personal and professional goals.

Some possible indicators of students' educational experiences are their retention and graduation rates, as one important cause of student attrition is academic difficulty. UCSC student retention and graduation rates remain lower than other UC campuses. The UCSC six-year graduation rate for the class entering in 1999 was 70%, whereas the UC system-wide rate was 80%. Although the UCSC first and second year student retention rates are improving, they again remain lower than the UC system-wide average. For the 2001 cohort, UCSC's one-year retention rate was 86%, and the two-year rate was 76%. For the 2002 cohort, these numbers are 87% and 77%. For the 2003 cohort 89% and 79% and for the 2004 cohort the one-year retention rate was 89%. This trend indicates that more of the students who accept admission to UCSC are staying. However, their initial placement in gateway courses including Mathematics and Writing reflects probable educational under preparedness for over 50% of each recent incoming class. More than 50% of recent first-year students did not satisfy the Entry Level Writing Requirement prior to fall enrollment, and over 50% of incoming students who took the Mathematics Placement Examination placed into algebra and pre-calculus classes.

In a study conducted by the Office of Institutional Research which compared UCSC with other American university campuses with similar first year student characteristics, it was determined that we are achieving better than expected student retention rates for Latino and African American students. In comparison with other "like" educational institutions, our retention of Asian students is lower than expected. However, UCSC retention data consistently indicates that we are retaining and graduating White students at a higher rate than students from underrepresented groups.

Data analysis also indicates that high school GPA emerges as the factor most predictive of retention and graduation, followed by standardized test scores. In a study that divided UCSC students into quintiles based on their high school GPA, UCSC students in the bottom quintile performed 8% better than predicted and student performance was 7% better in the quintile second from the bottom. These outcomes comparing UCSC students' academic achievement, retention, and graduation patterns with other campuses resulted in this reflection made by a member of the UCSC Administration, "UCSC does quite well in educating and graduating its less well prepared students." This interpretation of the data is, perhaps, what precipitated my decision to engage others in a dialogue regarding what is expected of a university in order to support a claim that it educates students well.

### **Educational Equity – Inclusion for Excellence**

Although they have earned admission to a University of California campus, there are many theoretical perspectives that attempt to explain why students from underrepresented groups experience academic difficulties more often than other students. These possibilities include: the deficiency of economic capital often experienced by ethnic minority families (Massy et.al, 2003); the lack of exposure to human capital as family members and associates do not possess professional and social prestige (Becker, 1964); the lack of parental education and the legacy of segregation and discrimination (Massy et.al, 2003); the continual influence of a caste

theory of exclusion wherein conquered and subjugated minorities (Native Americans, African Americans, and Mexican Americans) are unable to attain social and professional equality (Ogbu, 1978); the negative effects of attendance at low performing schools and/or schools organized using academic tracking (Anyon, 1996; Oakes, 2005); the lack of self efficacy (Chemers, 2001); and countless negative experiences based on exposure to negative stereotyping, perceivable social, educational, and economic inequities, and a plethora of other societal influences.

Yet, in spite of the economic, social, educational, and personal disadvantages which many California students from underrepresented groups experience, thousands achieve academic excellence in high school and meet UC eligibility requirements, meaning that, among other things, they have attained a high school GPA of 3.0 or above.

It is the top 12.5% of high school students in California who are welcomed into the UC system per the California Master Plan for Higher Education. They are among the brightest and the best young people in our State. The Board of Admissions and Relations with Schools (BOARS) has thoughtfully and carefully constructed UC admissions criteria that guide each campus in its selection processes in order to yield an academically excellent, diverse student body. Now it is time to seriously explore whether or not we are inviting them to higher education institutions which guarantee educational equity. Educational equity does not exist if there is a persistence of unequal educational outcomes for ethnic minority, low-income students.

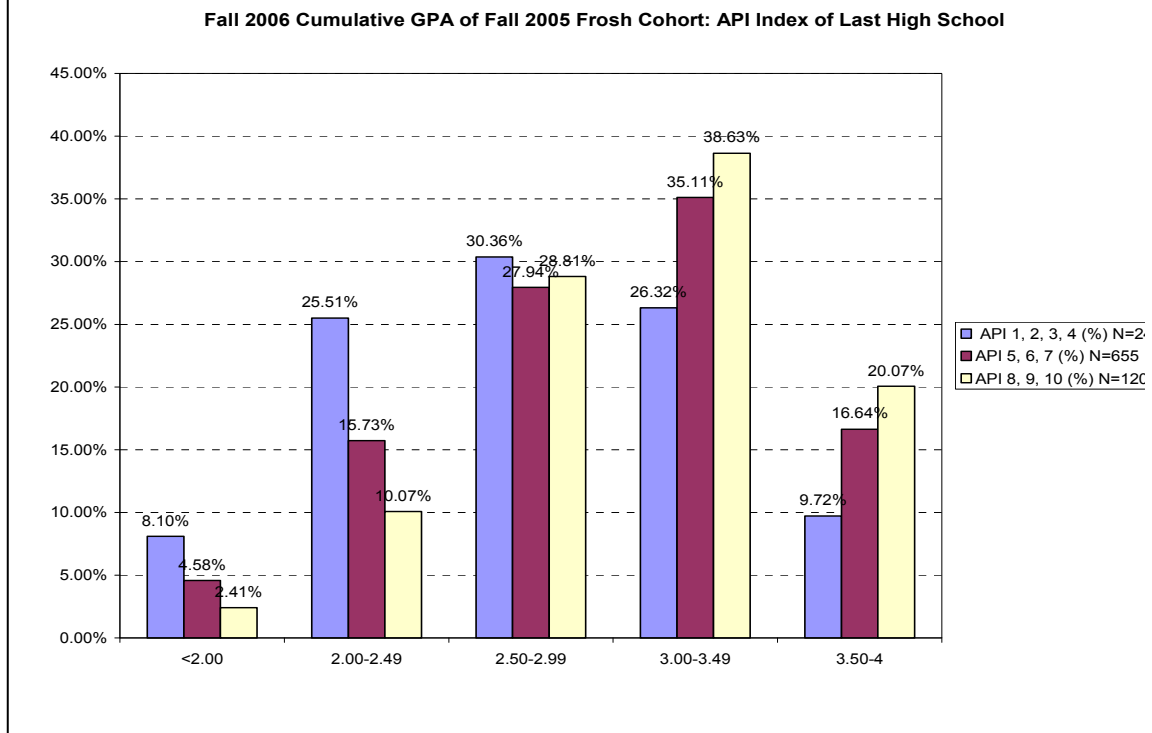
These unequal educational outcomes are often perceived by comparing academic measures such as grades and Grade Point Averages across student groups. Of course, at a UC campus one would expect to see grade differences among students. But, one would not expect to see discernable differences in academic achievement among specific groups of students based on such factors as ethnicity if the campus culture was one supporting educational equity. Bensimon and others consider educational inequality to be the result of a lack of institutional responsibility.

Resolution of this situational context of institutional diversity without educational equity is particularly the responsibility of individual faculty members who must reassess their understanding of the dynamics of teaching and learning. "Diversity and equity are different goals requiring different strategies." (Bensimon, 2005, p. 49) Does UCSC offer educational equity to its diverse student population?

#### *Overview of Student Academic Achievement Data*

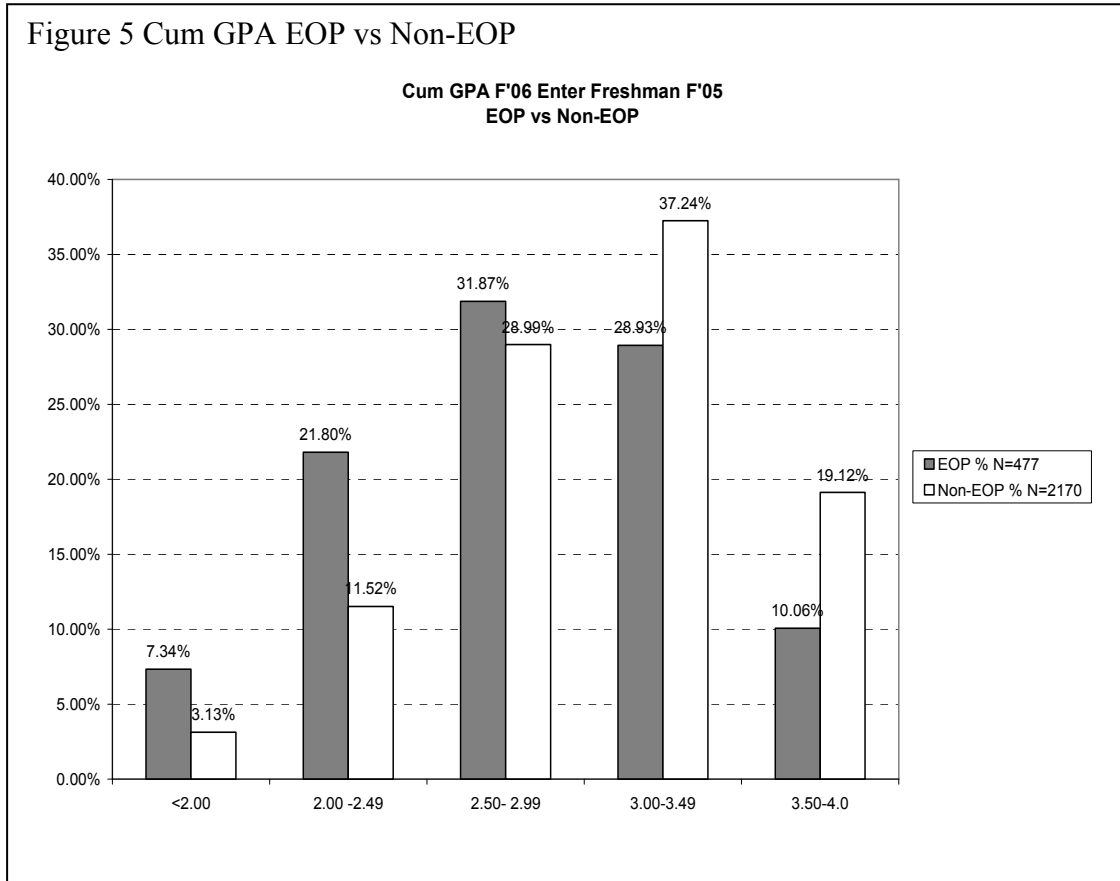
The following data presents an overview of the first four quarters of university study for the UCSC entering class of 2005. This data set was selected because it contains previously unavailable fields including: the Academic Performance Index score of the students' high school and Educational Opportunity Program (EOP) status generally indicating first-generation, low-income university students.

Figure 4 – Fall 2006 Cumulative GPA of Fall 2005 Frosh Cohort: API Index of Last High School



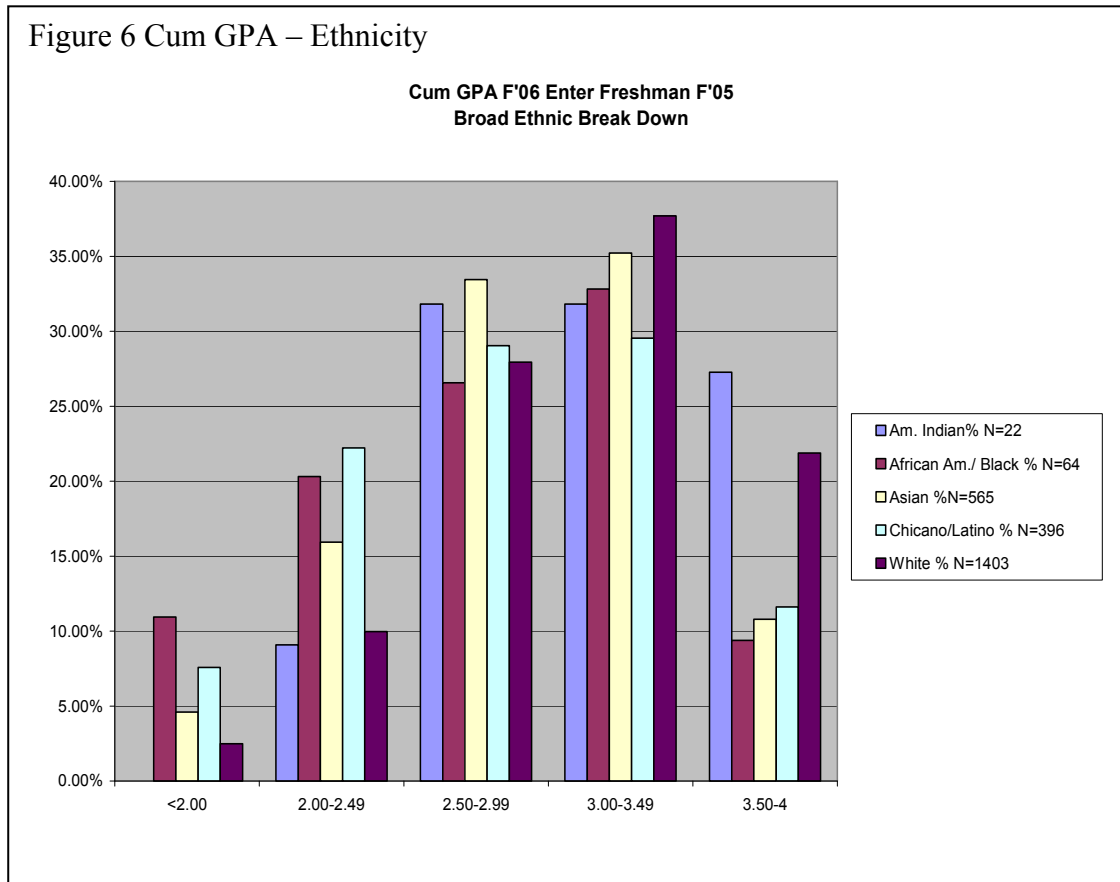
For purposes of this analysis, the high schools were divided into three tiers based on API score: top level, scores of 8, 9, & 10; mid level, scores of 5, 6, & 7, and low level, scores of 1, 2, 3, & 4. Approximately 68% of students from low-API schools had a cumulative GPA of less than 3.0 after their first four quarters at UCSC, whereas approximately 58% of the students from highly rated schools had a cumulative GPA above 3.0. The largest percentage of students from low performing high schools had a cumulative GPA of between 2.5 and 2.99, while those from the mid-level high schools (35%) and those from the high-level schools (38%) peaked in the GPA range from 3.0 to 3.49

This data indicates that the first-year courses at UCSC do not seem to have assisted incoming students to mitigate the differences in their educational backgrounds. Although all but approximately 4% of them met all UC eligibility requirements, the difference in the quality of their secondary-level schooling seems predictive of their initial university-level academic achievement. This trend is distressing, since the lower division gateway courses often taken in students' first and second year are highly academically predictive of students reading, writing, mathematics, and analytic and critical thinking skills. Development of these skills is essential for success in major-related, upper-division course work. They are, indeed, the foundation for students' entrance into and success within an academic major.



The cumulative GPA patterns for EOP students are reflective of those for students from low performing high schools with a 2% increase in EOP students who have earned a cumulative GPA of 3.0-3.49. This data seems to confirm the supposition that low performing high schools tend to be in impoverished neighborhoods where low-income, first-generation university students are most likely to be raised.

The obvious probability is that most of these students were likely to have high school grade point averages above 3.0. Therefore, for many of them, their first four quarters at UCSC resulted in lower academic achievement than they had previously experienced. What effect does this have on their sense of self-efficacy and the likelihood that they will remain academically underprepared to demonstrate intellectual excellence?



Sixty-one percent of the white students earned a cumulative GPA between 3.0 and 4.0 as compared to 42% for African Americans, 46% for Asians and 41% for Chicano/Latino students. Fifty-nine per cent of the Native American students earned a cumulative GPA in this range, but the N is quite small, only 22 students. It is also clear that a larger percentage of African American and Chicano/Latino students ended their fourth quarter in the GPA range of 2.0-2.4, a sometimes dangerous range where failing one course may mean the difference between good academic standing and academic probation. Over 10% of the African American students and 8% of the Chicano/Latino students had fallen into academic difficulty, joined by only 4% and 2% of their Asian and White peers.

The data suggests that the fourth term GPA is lower for EOP and low API students. One might expect that these students, though UCSC eligible, may have entered UCSC less educationally prepared than their more privileged peers. However, it is important to consider what academic interventions the university could and should build into students first year experiences. The disproportionate initial academic success of white students should be of concern to the university community.

#### *Demonstrating Mathematical Competence: A Curricular Gatekeeper*

A demonstrated Mathematics ability at the pre-calculus level is a pre-requisite for entrance into many majors at UCSC, including all programs in the divisions of engineering and physical and biological sciences and the Social Sciences Division majors of economics, psychology, and sociology. Most, if not all, UCSC-admitted



students have completed a minimum of three years of high school Mathematics classes, theoretically resulting in mathematical understanding sufficient to enable them to enter calculus courses.

However, this is not the case. Over 50% of the entering UCSC students who take the Mathematics Placement Examination each year do not earn a score designating them as having mastered Mathematics up through the pre-calculus level and more than 1,600 students each year enroll in pre-calculus courses. Five years ago, based on the consistently low pass rates (65-75% in the College Algebra and Pre-Calculus classes offered at UCSC, the Mathematics Department and Learning Support Services initiated a research study resulting in the implementation and evaluation of different instructional-delivery models.

**Table 1 – Course Pass Rates Math 2 and Math 3**

Table 1  
Course Pass Rates  
Math 2

	# of students in Class	Class pass rate	No Pass/W Rate	Withdraw Rate
Fall 2002	198	73.2%	26.8%	4.0%
Winter 2003	129	69.8%	30.2%	7.0%
Fall 2003	146	74.7%	25.3%	6.9%
Winter 2004	166	75.9%	24.1%	6.0%
Fall 2004	209	78.5%	21.5%	1.9%
Winter 2005	144	84.7%	15.3%	*
Fall 2005	162	84%	16%	*
Winter 2006	116	86%	14%	*
Fall 2006	185	84%	16%	*

\* Not available

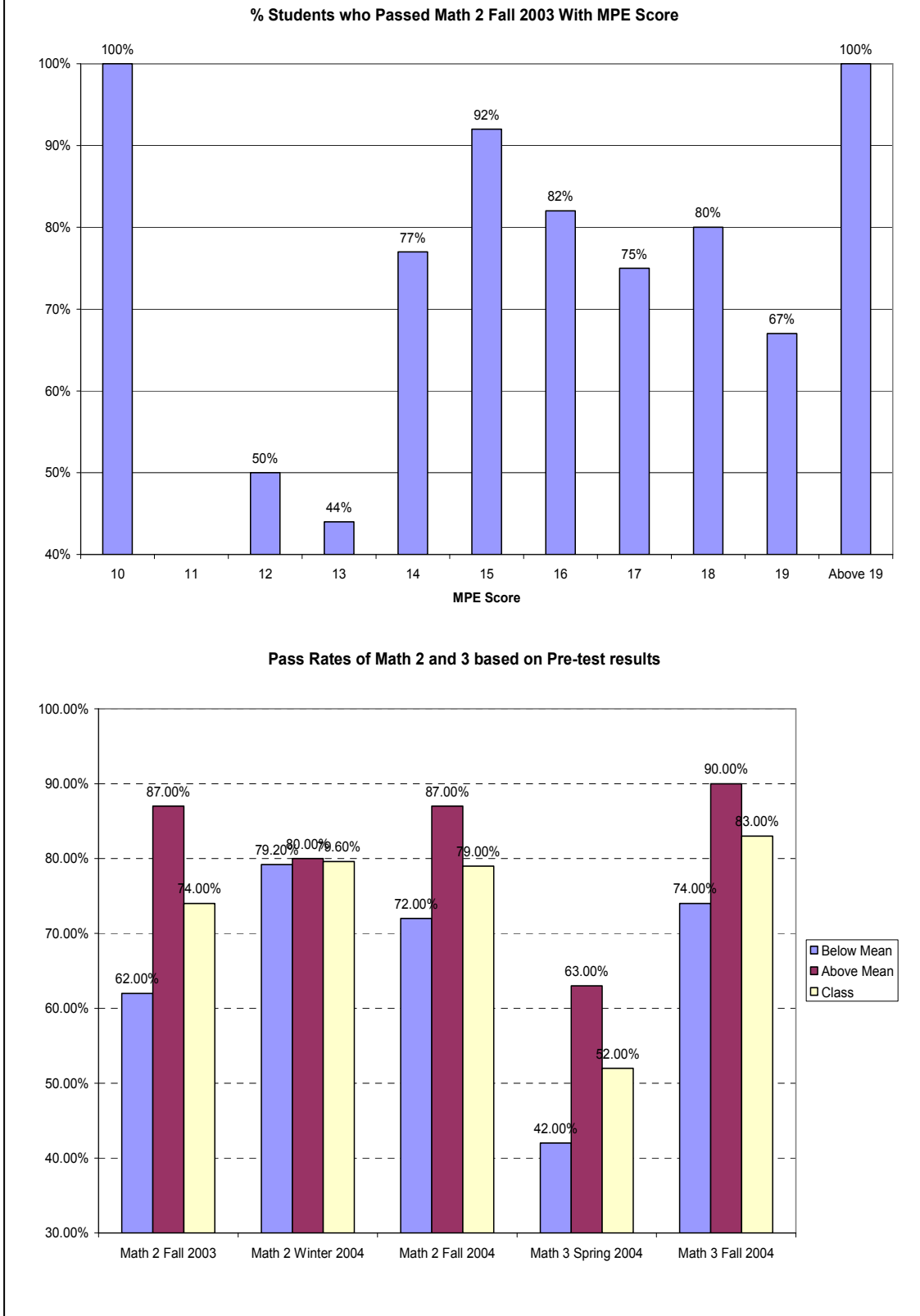
**Table 1 – Course Pass Rates Math 2 and Math 3**  
 Course Pass Rates  
 Math 3

	# of students in Class	Class pass rate	No Pass/W Rate	Withdraw Rate
Fall 2002 Section 1	252	97.2%	2.8%	1.6%
Fall 2002 Section 2	255	83.9%	16.1%	7.1%
Winter 2003	278	97.5%	2.5%	1.4%
Spring 2003	224	63.8%	36.2%	19.2%
Fall 2003 Section 1	251	76.1%	23.9%	15.1%
Fall 2003 Section 2	308	76.3%	23.7%	8.4%
Winter 2004	282	76.2%	23.8%	9.9%
Spring 2004*	267	51.7%	48.3%	17.2%
Fall 2004 Section 1	206	84.0%	16.0%	2.4%
Fall 2004* Section 2	239	82.0%	18.0%	2.1%
Winter 2005	348	79.9%	20.1%	*
Spring 2005	315	78.8%	21.2%	*
Fall 2005 Section 1	273	92%	8%	*
Fall 2005 Section 2	258	81%	19%	*
Winter 2006	310	73%	27%	*
Spring 2006	240	65%	35%	*
Fall 2007 Section 2	310	91%	9%	*
Fall 2007 Section 2	245	64%	36%	*

\* Data Not Available

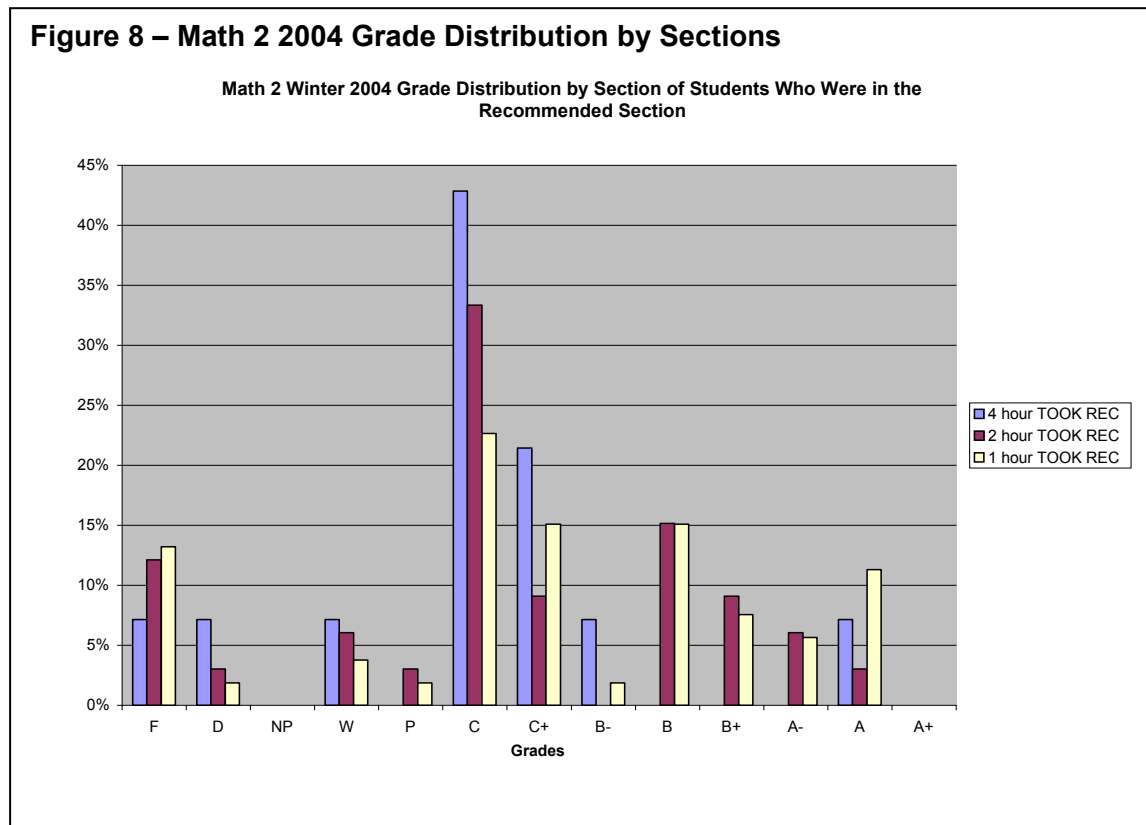
The first step in this research-based curricular adjustment project was to determine predictors of students' eventual success or failure in the two Math courses at the pre-calculus level, Math 2, College Algebra and Math 3, Pre-calculus. As the following data charts illustrate, based on both the Mathematics Placement Examination (MPE) scores and scores on pre-tests given to students to recommend them into small sections of one, two, or four hours, the students who scored lowest on these exams tended to earn the lowest grades in the classes.

Figure 7: Percent of Students Who Passed Based on MPE Scores and Pre-test Scores



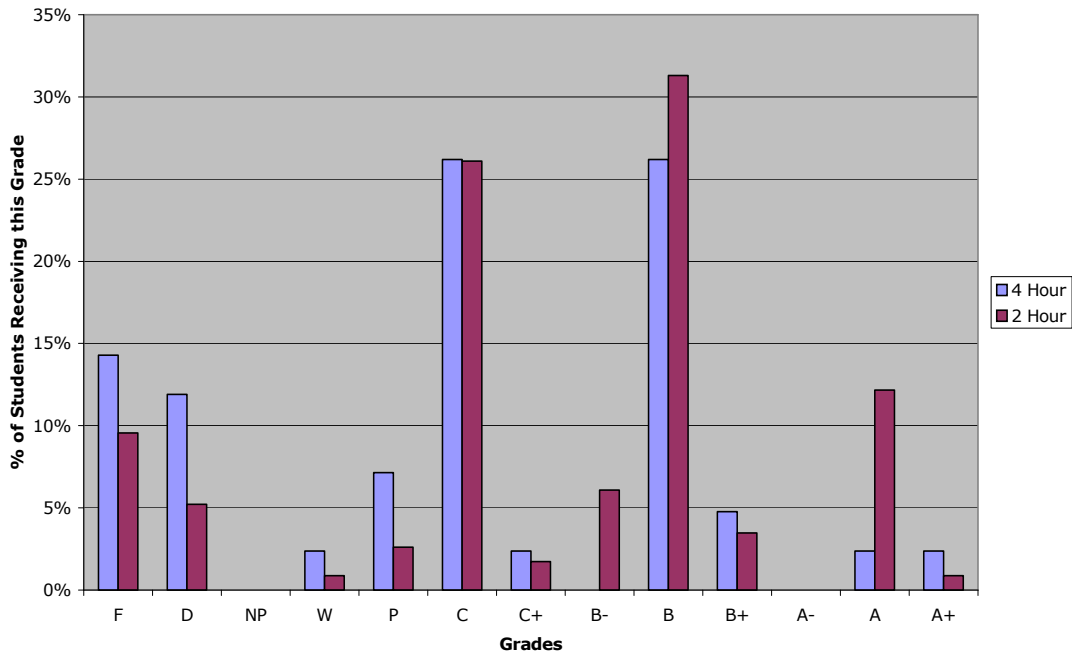
With the goal of increasing the likelihood that the pre-calculus Mathematics courses would enable students to demonstrate mathematical competence, the Mathematics Department and Learning Support Services implemented an instructional intervention wherein students in these large lecture classes (100 to 300 students) were recommended to enroll in required one, two, or four hour discussion sections. Section recommendations were based on students' MPE and pre-test scores.

Students were also encouraged to voluntarily attend Supplemental Instruction groups. As the following data indicates, when students accepted these enrollment recommendations, those whose MPE and pre-test scores were in the lower half of the range were more likely to spread themselves across the grade continuum. However, as is also evident, many of these students did not improve their skills so as to pass the class.



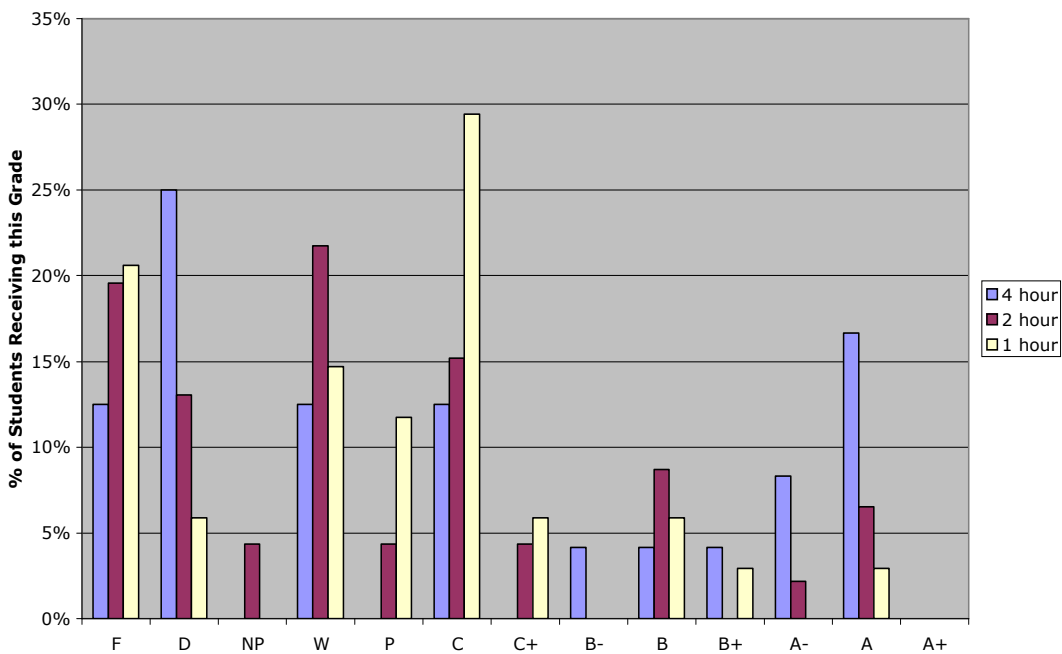
**Figure 8 – Math 2 2004 Grade Distribution by Sections**

Math 2 Fall 2004 Grade Distribution by Section of Students Who Were in the Recommended Section



**Figure 8 – Math 2 2004 Grade Distribution by Sections**

Math 3 Spring 2004 Grade Distribution By Section of Student Who W in the Recommended Sections



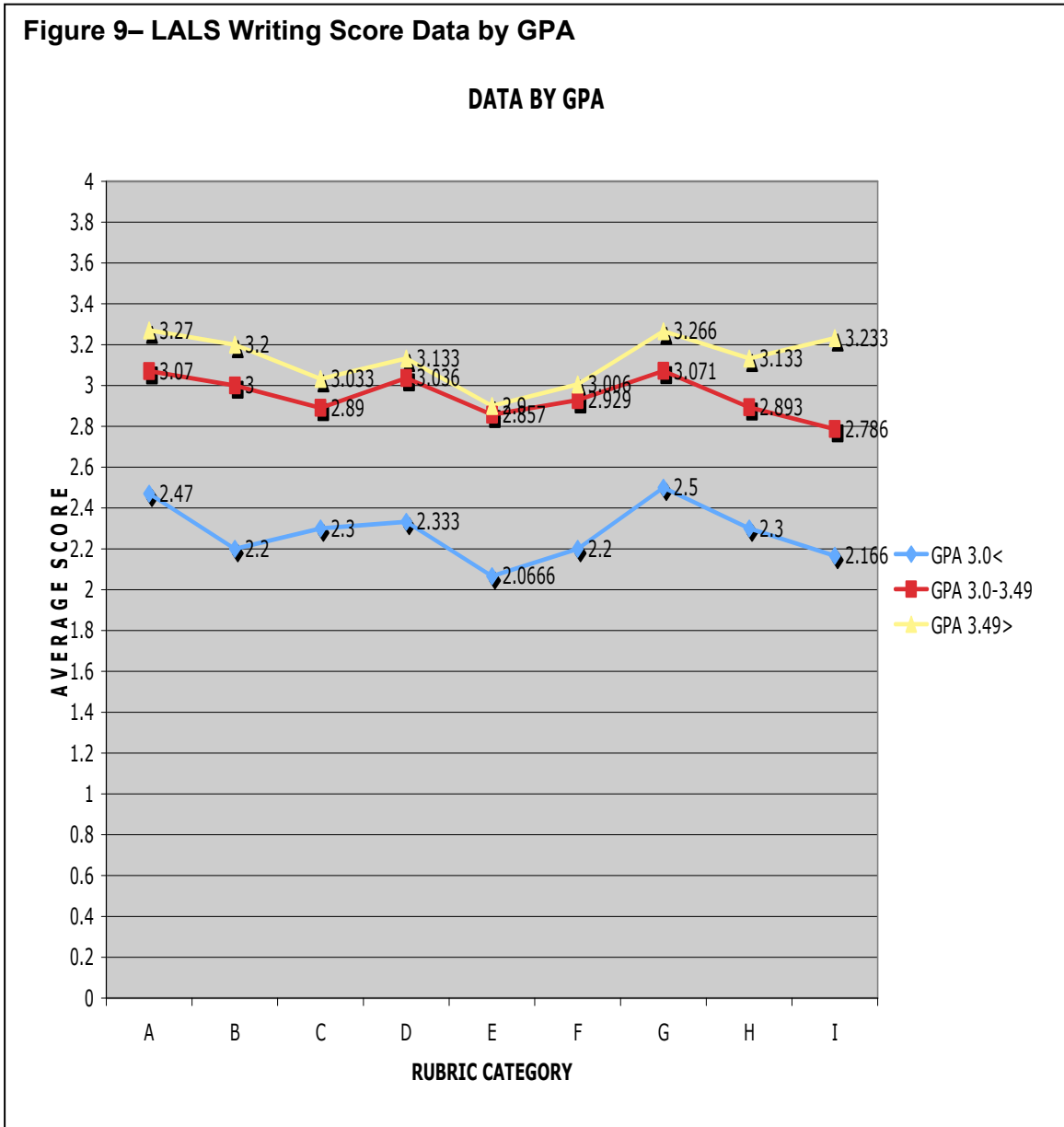
As could be expected, students whose demonstrable understanding of Mathematics was weakest based on the MPE and the course pre-tests were least likely to thrive in the courses. It does appear, however, that the instructional intervention of recommending that less prepared students enroll in small (12-15 students) required course sections does somewhat improve their likelihood of passing the class. The instructor who consistently teaches Math 2 commented that more underprepared Math 2 students have earned A and B grades since the small, longer interactive problem-solving sections have been available. This data is part of a larger study conducted over two years. Yet, it raises more questions than it answers regarding educational equity. The primary questions being, what responsibility does the University have for constructing and supporting a curriculum and instructional delivery system that enables more students to satisfy the pre-calculus Mathematics requirement? How can the University restructure its Mathematics education so as to enable incoming students to more readily pursue majors in their areas of interest?

### **Critical Reading and Writing Proficiency: A Potential Stumbling Block to Educational Equity?**

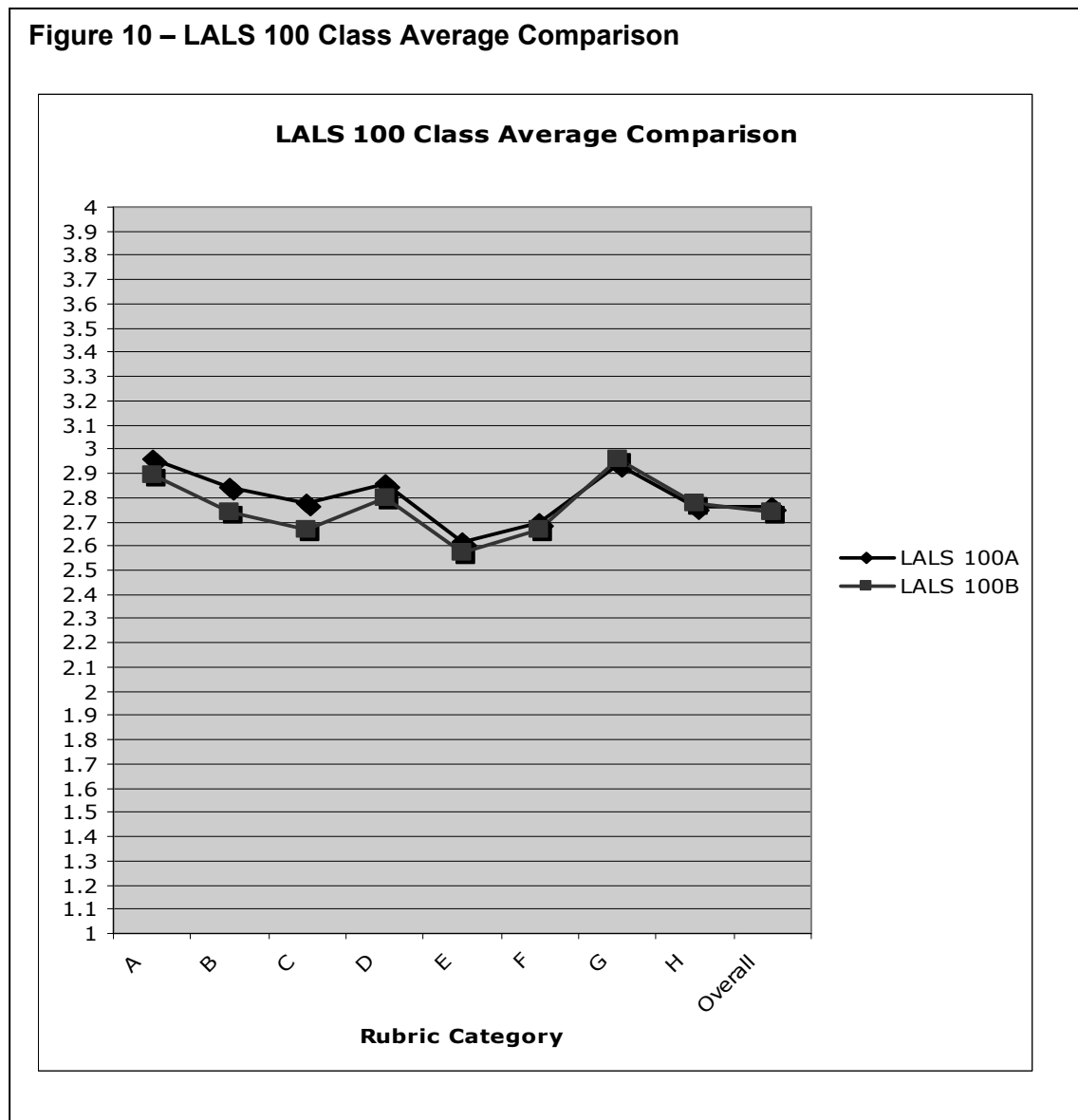
In a study entitled, "Increasing Writing Support for Cognitively Engaged but Underprepared Writers in Upper-Division LALS and Sociology Courses," the academic performance of 40 students enrolled in two upper-division Latin American/Latino Studies classes was examined. Forty-eight students, 23 who had completed LALS 100A and 25 who had completed LALS 100B agreed to participate in this research by giving us access to their final papers and their UCSC transcripts. In an attempt to gain a better understanding of students' profiles as writers, we analyzed both their writing samples and their transcripts with emphasis on their performance in UCSC writing classes. Graduate students in LALS and Sociology, Learning Support Services staff and Writing program faculty participated in a holistic reading/scoring of the 48 student papers. The evaluation/scoring rubric was adapted from one used by the UCSC writing program for its own study of consistency among student writing in the second quarter of the required, post-ELWR composition course series. The categories of the writing rubric and the average reader score on the scale of 1 (low) to 4 (high) for each rubric category are as follows:

- A. Ability to establish and maintain an appropriate purpose or coherent set of purposes in reference to the assignment and the audience. (2.9)
- B. Ability to employ appropriate and effective strategies of development to accomplish the writer's purpose.
- C. Ability to anticipate and meet readers' needs for content and clarity. (2.7)
- D. Ability to demonstrate understanding of the theoretical perspectives embodied in the course. (2.8)
- E. Ability to edit accurately. (2.6)
- F. Ability to employ an effective prose style. (2.7)
- G. Ability to cite others information, words, and ideas correctly. (3.0)
- H. Ability to use other information, words, and ideas accurately and effectively. (2.8)

Papers also received an overall rating the mean of which was 2.8. As is evident from the following chart, students' cumulative GPA was likely to be predictive of their holistic score on their course papers.



As papers from two different courses were analyzed for this study, Figure 10 is included to illustrate the scores by rubric category for the two courses.



In order to develop a profile of the more and less successful students in these classes, we categorized students by their cumulative GPA ranges using several different markers including: area of academic major, students' ELWR history, ethnicity, EOP status, transfer vs. native status, and likely native language other than English. This data reveals concerns related to educational equity.



	GPA of 3.5-4.0 (16 Students)	GPA of 3.0-3.49 (13 Students)	GPA Below 3.0 (18 Students)
<b>Average Grade in LALS 100A or 100B</b>	3.57	3.36	2.9
<b>Ethnicity</b>			
-Hispanic	13%	85%	83%
-Caucasian	75%	15%	17%
-Asian	6%	0%	0%
-Not Specified	6%	0%	0%
<b>EOP Students</b>	13%	62%	88%
<b>Transfer Students</b>	50%	23%	22%
<b>Enrolled in Spanish for Spanish Speakers</b>	13%	23%	72%
<b>Average Overall Reader Score</b>	3.23	2.79	2.17

Areas of particular relevance to issues of educational equity are the Entry Level Writing Requirement (ELWR) history of the students, their ethnicity, their EOP status, and their possible native language other than English. Students who satisfied the Entry Level Writing Requirement prior to enrolling in their first quarter at UCSC were the most likely to have high grades in LALS 100A & 100B.

Those students who did not satisfy ELWR during their first quarter Core/Writing 1 course had cumulative GPAs of 3.5-4.0, nor did they earn the highest course grades. More Caucasian students earned the highest grades in the course and had the highest cumulative GPAs. The students who earned course grades below 3.0, whose GPA's were also below 3.0 were 88% EOP students, whereas the group with both the highest GPAs and the highest course grades was comprised of 87% non-EOP students. As UCSC does not have a clear post-enrollment marker for students whose native language is not English, we used enrollment in a Spanish for Spanish Speakers course as an indicator. It might also be argued that fluent Spanish could be an advantage in upper division LALS courses. However, 75% of the group earning grades below 3.0 is comprised of students who completed Spanish for Spanish Speakers courses.

Six long-time professors in the Latin American Latino Studies and Sociology departments were interviewed as part of this study. They spoke extensively regarding their disappointment in students' lack of academic reading, critical and analytical thinking, and writing skills. They described their attempts to develop assignments that would guide students to read actively and thoughtfully, think critically, and demonstrate their intellectual understanding by submitting analytic/argumentative papers.

Yet, they were continually overwhelmed by the expectation that they cover the course content and overtly assist students to improve their academic reading and writing skills within a ten-week quarter. From their perspectives, they and their teaching assistants were completely overburdened by the paper reading load, preventing them, for the most part, from allowing students to revise paper drafts. Therefore, effective, content-specific

academic reading and writing skills were more of a prerequisite to the courses than a part of the courses for all but one of the instructors.

This data raises important questions regarding educational equity at UCSC as it indicates that students who entered UCSC without having satisfied the Entry Level Writing Requirement, coming from low socio-economic backgrounds, being the first in their families to attend a university (EOP), and students whose native language may likely have been Spanish have cumulative Grade Point Averages and earned grades in upper division LALS courses lower than their peers.

When reading the students narrative evaluations from their writing instructors, an obvious trend emerged. Although these initially educationally underprepared students improved in each course, they completed the composition series with writing skills described in various ranges of “fair,” and passing, but not laudable. Even with its multi-quarter, lower division writing program allowing students as many as four quarters to satisfy ELWR, many students seem to require continued instructional guidance as they address the challenges of upper-division, content-specific academic writing tasks.

Though instructional enhancements including a companion two-unit writing course and required participation in sessions with a Writing Assistant to support students in designated upper-division LALS and Sociology classes were developed, these planned instructional interventions have not been implemented due to lack of funding. Again, data indicates differential, but seemingly unaddressed, students educational needs.

*Data Snapshots from a Longitudinal Study of Students of Color*

To develop a deeper understanding of the academic experiences of students of color at UCSC, I conducted a longitudinal (1999-2004) study of 34 incoming freshmen from a stratified random sample of 100. These students responded positively to my invitation, volunteering to participate in this research. The table below describes the number of quarters which students spent at UCSC.

Number of Quarters Completed				
15	14	13	12	Fewer than 12
1 student, 3%	2 students, 6%	5 students, 15%	14 students, 41%	12 students, 35%

Forty-one percent of the students were in good academic standing during all of the quarters that they attended UCSC. Forty-seven percent of the students were in Academic Warning for one or more quarters, 41% were on academic probation for one or more quarters, and 21% had their enrollment barred due to academic difficulty. Thirty-eight percent of the students attended one or more UCSC summer sessions. Sixty-two percent of this group of students graduated from UCSC, 8% less than the 70% six-year graduation rate. Academic Grade Point Averages are not available for these students, as they were admitted to UCSC during the period when UCSC used a pass/no pass course evaluation system supplemented with narrative evaluations. The 2-year retention rate for the group was 75%, as compared with 76% for the entire first-year, 1999 class.

Some background data regarding these students might be interesting before examining some of their comments regarding their analyses of themselves and their integration into UCSC.

Thirty-one of the students were regularly admitted, and three were students admitted under the designation of “Admit by Exception.” Two of these students were required to participate in the EOP Bridge program.

In interviews with these students, several major themes emerged. In general, students initially felt that their high schools had adequately prepared them for UCSC, and most found their first quarter to be less challenging than they had expected. However, by the end of the spring quarter of their first year, most students indicated that their high schools had not prepared them adequately. This sense of the inadequacy of their previous education increased over time.

The general observation was that the high schools had not provided them with the conceptual understanding necessary for success at UCSC. Too much attention was paid to standardized test-oriented education. Students found the large classes at UCSC impersonal. This group of students was hesitant to approach professors and teaching assistants. They also did not consistently seek Learning Support Services. Most consistently expressed a lack of self-confidence and often blamed themselves for their academic failures. Their analysis of the University’s responsibility for their academic difficulties focused on their discontent with their course-by-course experiences.

All offered negative evaluative comments regarding professorial disengagement from students and the instructional process, as well as critiquing the lack of teaching ability exemplified by many teaching assistants. While expressing disappointment with their overall academic records, they tended to praise themselves for passing classes and blame themselves for not achieving outstanding evaluations and or failing classes. For example, 50% of the 22 students who attempted Mathematics failed one or more of these classes. Although only 18% of this group of students of color did not satisfy the Entry Level Writing Requirement by the end of their first quarter at UCSC, their Narrative Evaluations in most cases (with two notable exceptions) do not indicate that they demonstrated excellent writing skills in classes throughout the curriculum.

Most of the students felt uncomfortable with the issues of diversity on campus. Their sense of being students of color increased dramatically from what it had been in high school. Many felt uncomfortable in classes and in certain areas of the campus. One light-skinned Filipina commented, “I feel so dark here.” In most cases, their level of discomfort increased as their financial situations worsened. The low-income students of color in this research group felt least equipped to avail themselves of university resources and most intimidated by the self-confidence required to survive in a large

#### Ethnic Identification of the 34 Students:

African American	2
Chicano/Latino	15
Filipino	2
Chinese	6
Vietnamese	1
Korean	2
Pacific Islander	2
Japanese	3
Other Asian	1

#### The high school Grade Point Average data for this group of 34 students is as follows:

2.5 – 2.9	2	6%
3.0 – 3.49	18	53%
3.5 – 4.0	13	38%
Above 4.0	1	3%

lecture class: asking questions, seeking conversations with professors during office hours, participating in sections, approaching teaching assistants, and initiating study groups and/or participating in supplemental instruction and tutoring sessions.

A true sense of academic integration into the intellectual life of UCSC deemed so important to student satisfaction by researchers including Vincent Tinto (1993) was illusive for the majority of these students. This is not to discount the many social discomforts that these students experienced. Yet, the interview data consistently revealed that these students found a niche among a peer group far more easily than they established a comfort zone and developed a sense of self efficacy so as to enable them to directly address their educational needs, needs which they continually articulated. "I know I should talk to my TA, attend supplemental instruction sessions, get a tutor.... But, I don't have time, I don't feel comfortable, I just need to spend more time on my work, I feel dumb when I ask questions," and so on.

This group of 34 students of color attending UCSC shared several of the academic concerns voiced by the responses to the University of California Undergraduate Experience Survey (UCUES) as summarized in data released in Fall, 2004. As with this group of 34 UCSC students, UC students in general had serious concerns regarding their academic experiences. A summary of the UCUES 2004 results indicate that:

- A. Academics were of particular concern to most students
- B. In terms of overall items mentioned in students' responses, 74% were academic in nature, while 26% concerned non-academic aspects of the undergraduate experience.
- C. Twenty-Nine percent of students were concerned with the availability, access and/or size of undergraduate classes.
- D. The second most salient item concerned faculty. Seventeen percent of students (N = 750) commented on the competence, accessibility, and/or commitment of faculty. (UCUES 2004 Data Report)

The group of 34 UCSC students were particularly disappointed by the large classes and their impression that many of their professors did not seem to be excited about teaching. They frequently described the instruction as impersonal and, therefore, both intimidating and alienating. They looked to the faculty to guide their learning. Their frustration continued during sections as they often felt uncomfortable asking questions and claimed that sections should offer more review and "teaching" of the material presented in lectures and assigned reading.

### **Concluding Reflections**

This paper presents only a very preliminary consideration of the apparent lack of educational equity at the University of California Santa Cruz, a pattern which is probably evident at most, if not all, of the other University of California campuses. However, many important questions and concerns do emerge which should be of interest to UC faculty and administrators. Perhaps the overarching question is what responsibility do the UC administrators and faculty have to ensure that all admitted UC students have an equal opportunity to achieve educational excellence? How can and should the academic environment be restructured to decrease the degree to which students' ethnic, socio-economic, and educational backgrounds influence their overall academic achievement, and thus their likelihood of demonstrating excellence? As the small

research studies discussed in this paper illustrate, specially designed curricular and instructional adaptations may be essential.

Participating in this symposium regarding the undergraduate experience at the University of California- focused on the current and potential uses of the University of California Undergraduate Experience Survey- has awakened me to the potential of this instrument to present professors and policy makers with in-depth profiles of groups of students' experiences and attitudes. At UCSC, for example, these profiles will be very useful should the campus begin to address the obvious academic challenges for students coming from low-performing high schools and underrepresented ethnic groups. More information regarding the influence of such academic gatekeepers as underpreparedness in the areas of Mathematics, academic reading, academic writing, and critical and analytical thinking could be gleaned. If UCSC and, as is very likely, the entire UC academic community is not comfortable with the probable, pervasive underachievement of students from low-income backgrounds attending low and moderately performing high schools, then an informed dialogue regarding teaching and learning must be initiated, resulting in organizational, curricular, and instructional modifications to mitigate the previous educational inequalities which UC-admitted students have experienced and thus equalize their opportunities to compete with their more privileged peers and demonstrate educational excellence.

A clear understanding of diverse students' undergraduate experiences is an essential component of the dialogue needed to plan and implement the institutional changes required to equitably educate the Californians being invited to enroll at a UC campus. A true commitment to sustaining a University of California system serving the demographic diversity of California must include equalizing students' opportunities to attain educational excellence. Therefore, it seems evident that, at UCSC, dialogue regarding reshaping the undergraduate teaching and learning patterns should focus on increasing student access to the excellent resources present in the University of California.