



# **Student Retention Task Force Report, Findings and Recommendations**

**Fall 2009**

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## Executive Summary

Postsecondary institutions across the country are feeling the pressure to improve retention and graduation rates in this time of economic distress. President Ruben Armiñana's ongoing interest in these matters led to the "Student Retention Task Force," made up of several campus leaders who work in a variety of campus units. Provost Eduardo Ochoa gave the charge to the task force in the Spring 2009. The charge was to investigate the factors that go into retaining our students from year to year and to make recommendations for improving retention and graduations rates. School of Science and Technology Dean Saeid Rahimi led the task force, providing the overall campus context and guidance throughout the process.

Data for this report comes from three separate sources: (1) baseline data; (2) survey data; and (3) Admissions and Records data on students entering SSU in the fall 2004 semester. The baseline data allowed the task force to compare SSU's retention and graduation rates to the other 22 campuses in the CSU system. The survey data allowed the task force to evaluate information coming straight from the students themselves at the end of the 2009 spring semester. The Admissions and Records data allowed us to consider a more complete SSU student population.

This report is a stand-alone document that uses new data sources that are now also available for other SSU educators interested in the retention issue. Other reports are available as well on the Institutional Research pages of the university website: The annual CIRP Freshmen Survey and the National Survey of Student Engagement, among other reports, provide related information. See <http://www.sonoma.edu/aa/ir/> for more.

The specific reasons for why students leave or stay are as varied as every student who sits in an SSU class; general reasons, on the other hand, may be discernible from survey and student demography data. Baseline data are discussed and analyzed for first-time, full-time freshmen who started in Fall 2002 and graduated by spring 2008. Simple comparisons between SSU and the CSU campuses show that SSU is close to the CSU average in terms of six-year graduation rates and is somewhat below CSU average in terms of one- and two-year retention rates. Also, SSU has one of the highest rates of students transferring to other CSU campuses, community colleges, and University of California (UC) campuses in the CSU system. The percent of first-time, full-time freshmen who started at SSU and graduated from another CSU campus varied between 11.6% and 14.5% from 2000-01 and 2004-05. Concerning ethnicity, SSU retains a diverse student body once they start here; generally, there is not a large migration away from SSU as compared to other, more urban campuses. Also, SSU tends to graduate students from diverse, ethnic backgrounds more regularly than other campuses although there is some migration away from SSU of ethnic minority students who end up earning their bachelor's degree at a second CSU campus. It needs to be noted that our first-time freshmen come primarily from within California (82%) with only 16% coming from our six county service area (all eligible local students who are admissible at the CSU eligibility index are automatically admitted). These trends need to be examined for several years to see if they are consistent over time.

Within SSU, we see gender and racial differences starting with one- and two-year retention and being more dramatic at the six-year graduation rate for our first-time, full-time freshmen (fall 1994 to fall 2007 cohort averages). At one-year retention we see the highest percentages for women, Asian or Pacific Islander, and White. Lower rates are reported for males, Black, Hispanic, Native American (with a small sample size) and non-resident Aliens (from another State or U.S. Possession or a foreign country). These trends grow larger by the second-year retention. At the six-year graduation, the average rate is highest for female (53%), Asian or Pacific Islander (47%) and White students (52%). The six-year graduation rate for the other gender and racial groups is 44% for males, 32% for Black, 42% for Hispanic, 46% for Native American and 30% for non-resident aliens.

The California Community College junior transfers are also tracked in baseline data from the CSU Chancellor's Office. This group is from both SSU's six-county service area (58%) and from other parts of California (41%). Most of this group comes from the Santa Rosa Junior College (46%). The three-year graduation rates for transfer students (average from 1999 to 2005 cohorts) are 53% female, 44% male, 41% Black, 43% Hispanic, 44% Asian or Pacific Islander, 41% Native American, 52% White, and 52% Non-resident Alien. At six years for transfer students, the rates increase to 74% female, 67% male, 52% Black, 64% Hispanic, 60% Asian or Pacific Islander, 63% Native American, 74% White, and 81% Non-resident Alien.

In Spring 2009, a survey was administered to a self-selected sample of SSU students who responded to an email asking them to complete an on-line survey. Some 1,300 students responded. The survey asked questions to determine the respondent's potential for transferring to another institution, and thus not being retained by SSU. Using a multinomial logistic regression model, where the survey question asking about potential transfer is the dependent variable, other questions and student demography were used to see what may influence students to be more likely than less likely to transfer. If students were satisfied with their academic progress, the variety of classes, extracurricular activities, department advising, and SSU generally, they were less likely to transfer. Many other variables had no significant relationship with the possibility of transfer versus a lower likelihood.

Admissions and Records painstakingly provided demographic data on students from multiple semesters to provide some further evidence as to the type of student who is more likely to be retained. The Fall 2004 entering class was chosen as a case study because the data were available to investigate one-, two- and four-year retention rates. The data showed the task force which students graduated, which continued to attend SSU, and which were not retained for non-academic reasons. Using a binomial logistic regression model, where the dependent variable was whether the student was retained or not after one year, two years or four years (or graduated), the results were somewhat similar from year to year. As to one-year retention, higher GPA students are more likely to be retained. In particular, a higher total GPA is a larger signal of retention for transfers, first-time freshmen and continuing students. Further, high school GPA is significant for freshmen retention; the Pearson's correlation coefficient between these GPA measures is

-0.2011. This signals that students who struggle to achieve academically need to be identified early and to be provided assistance. For two-year retention, the results were similar for academics; local students are more likely to be retained than those who come from places outside the SSU service area. For four-year retention, some classic themes emerge: higher GPA, younger, female students from the SSU service area, and non-EOP students are more likely to be retained.

Concerning ethnicity, ethnicity is not a negative factor in students being retained at one, two or four years. Concerning enrollment status, returning students are the most difficult to retain over four years. First-time freshmen students are retained fairly well over time and complete their degrees at SSU, which the baseline data suggest as well. Students who need math remediation are less likely to be retained. Retention falls when students have undeclared majors across one-, two- and four-year retention rates. There was insufficient data to connect financial aid to retention.

These results have inherent weaknesses and are meant as a beginning to systematically monitoring and studying the factors that affect retention at SSU. Because this is simply one class and one survey result, Fall 2004 and Spring 2009, we must be careful not to generalize too much. However, the following recommendations are made to the administration, faculty and staff of Sonoma State University to increase retention rates:

- **Hold a “Student Feedback Week,” that has as its centerpiece the completion of the yearly retention survey. The week will feature campus-wide activities that will promote dialogue between faculty/staff and students addressing retention issues. The goal is to describe SSU’s uniqueness and why most students want to say here;**
- **Make retention monitoring a systematic exercise through a joint venture of Institutional Research and a committee comprised of staff and faculty;**
- **Require students to declare a major at the beginning of their sophomore year rather than at the beginning of their junior year;**
- **Review prior committees’ recommendations, identify best advising practices, and work with each school to tailor and optimize advising models most appropriate for their various disciplines;**
- **Consider more support and monitoring for:**
  1. **Students who need remediation;**
  2. **Older students during their first and second year; and**
  3. **Students who come from outside SSU’s service area;**
- **Analyze the data from the Student Satisfaction Survey given in Spring 2010 separately for freshmen who start at SSU compared to juniors who transfer into SSU;**
- **Analyze the retention and graduation rates data on SSU students compared to the other CSU’s for 5 years to see if the trends identified for the Fall 2002 first-time freshmen are consistent over time; and**
- **Expand analysis to include financial aid data as possible for each year in the sample.**

## Introduction

Sonoma State University is a “destination campus” among the 23 CSU campuses. This “destination campus” label suggests, among other things, that prospective CSU-system students access and come to possess a certain perspective on SSU while making the decision to come here, that there is something to know about SSU, and that prospective students know it. Students want to come here because of certain characteristics and qualities of our campus such as its physical beauty, its location away from a major metropolitan center, its relatively small size, and for other reasons. Following this same logic, wanting to attend a “destination campus” also means students are already invested in an attachment to SSU even before they start taking classes here. If SSU were not a destination campus, students would be choosing to come here for not so well-formed reasons or maybe for no real reason at all. Students who choose to attend a destination campus like SSU are likely to have a fairly fixed image of that campus in mind, and perhaps when that campus does not match that fixed image, they are more likely to be disappointed and more likely in some cases to want out, to transfer to other institutions.

President Armiñana’s interest in improving retention numbers started this process. SSU’s Retention Task Force was then charged by Provost Ochoa to investigate the many factors that go into retaining our students from year to year and to make recommendations for improving retention and graduations rates. School of Science and Technology Dean Rahimi led the task force, providing the overall campus context and guidance throughout the process. Through our analysis, a picture is starting to emerge of why students either stay at SSU or transfer elsewhere. We feel that understanding what it means to say that SSU is a “destination campus” is important to understanding SSU student retention. The emerging picture is that SSU has a polarized student population in the context of retention and graduation rates. Students either like it very much here or they don’t like it at all. The 2008 SSU Alumni Attitude Study confirmed that the majority of students like it here very much. A survey was given to alumni of 18 of the 23 CSU campuses; respondents were queried in a number of areas including communication with the university, Alumni Association activities, and general satisfaction with SSU when respondents were students. A high number of SSU alumni say they had a “good” or “excellent” experience at SSU when they were students. SSU ranked 4<sup>th</sup> out of the 18 campuses surveyed in the category of general satisfaction with the university. Information such as this adds to the Task Force’s view that SSU tends to have a polarized student population.

This is an *emerging* view. Looking ahead, a polarized student population in the context of retention may not necessarily be a bad thing. On the one hand it might mean that we don’t have to do too much differently to retain and graduate those students (the majority) who are already highly invested in liking the institution; however, it might also mean that we will have to work harder to satisfy those students at the other end of the spectrum, those students who appear to be motivated to leave SSU for other campuses.

## Base-Line Data: Comparisons with other CSU Campuses

SSU's retention and graduation statistics are markedly different from the statistics for other CSU campuses. SSU students are somewhat more likely not to be retained during their first two years of study, year to year. They are much more likely to transfer to another CSU campus during their matriculation, and they are much more likely to start at SSU and graduate from a different CSU campus.

The Retention Task Force examined SSU's base-line retention and graduation data keeping in mind a number of highly esteemed retention models. In Tinto's model (1993), for example, student success and retention is determined by pre-entry attributes, goals and commitments, and academic and social integration. Bean and Metzner's model (1985) covers some of the same ground as Tinto, but emphasizes environmental factors such as student employment and finances and being comfortable with the bureaucratic structure of postsecondary institutions as having significant influence on persistence. Seidman (2005) focuses on students at risk and early identification of such students. Once identified, Seidman says, intensive and continuous intervention is necessary to keep students enrolled. Finally, Witt and Handal (1984) promote the idea of "institutional fit" as being central to retention, with a good "fit" naturally leading to more student engagement and more involvement with the institution. The Task Force rejected rigidly following any one or even two of these models in favor of using the components of each that best describe SSU's situation. From the beginning we conceived of SSU's retention profile as consisting of two main categories: Academic performance and institutional fit. We hypothesized that students who are not retained leave because they either have trouble keeping up academically or have trouble fitting in and being comfortable at SSU (what's called "institutional fit" in the literature).

## **Six-Year Graduation Rate**

It makes better sense, as we shall see, to start the analysis of this data with the six-year graduation rate—rather than the one-year and two-year retention rates—when considering the overall retention of SSU students: which students stay and which students go. This is because complementary data collected along with this baseline data include important information about student transfer behavior versus their graduation rates.

In the fall 2002 semester 1,210 first-time freshmen began their postsecondary education at SSU. Six-years later, after the spring 2008 semester, 600 of these students received their bachelor's degrees from SSU. Therefore, **SSU reports a six-year graduation rate of 49.6 percent.** This six-year graduation rate of 49.6 percent is in the middle of the pack among the 22 CSU campuses (CSU Channel Islands is not included in this analysis as it is too new to have a six-year graduation rate). Some CSU campuses have lower six-year graduation rates, some campuses have higher rates. For example, the six-year graduation rate for CSU Northridge during this same time period was 41.1 percent and for CSU Sacramento 41.6 percent. On the other end of the spectrum, the six-year graduation rate for CSU Chico was 55.7 percent and for CSU San Diego 61.3 percent. **The average, six-year graduation rate for the whole CSU system from fall 2002 to spring 2008 is 48.9 percent.**

Even though SSU is more or less at the average among all CSU campuses in the context of the six-year graduation rate, four characteristics of our students clearly sets them apart. For example, (1) **7.2 percent** of those 1,210 first-time freshmen starting at SSU in the fall 2002 semester who did not graduate in six years from SSU transferred from SSU to another CSU campus and graduated from that second campus within six years. (2) **7.7 percent** of those 610 first-time freshmen (50.4 percent of the whole class) starting at SSU in the fall 2002 semester who did not graduate in six years transferred to another CSU campus to continue their education. (3) **62.1 percent** of those 610 first-time freshmen starting at SSU in the fall 2002 semester who did not graduate in six years transferred to a community college or a UC campus to continue their education. Finally, (4) only **4.3 percent** of those first-time freshmen starting at SSU in the fall 2002 semester who did not graduate in six years continued their education at SSU. These four figures are all fairly extreme among CSU campuses, which generally speaking tend to hold on to their own, “homegrown” students at higher rates than SSU.

**Category 1:** Students who did not graduate in six years and transferred to a second CSU campus and graduated from that second campus.

**Category 2:** Students who did not graduate in six years and transferred to a second CSU campus to continue their matriculation.

**Category 3:** Students who did not graduate in six years and transferred to a community college or a UC system campus.

**Category 4:** Students who did not graduate in six years and continued their matriculation at the first (home) campus.

(1) Only one CSU campus, Monterey Bay, reports a higher percentage than SSU in terms of students starting at one CSU campus and graduating at a different one within six years. Students starting at Monterey Bay, which possesses some special characteristics that explain this high transfer rate that SSU does not possess, graduated at a different CSU campus at a rate of 8.7 percent. The campuses with the lowest percentage of students starting at one CSU campus and graduating at a different one were CSU Los Angeles and CSU San Bernardino, each at 1.4 percent. **The average for the entire CSU system in this category is 3.1 percent.**

(2) No other CSU campus reports a higher percentage of students transferring to another CSU campus to continue their education than SSU’s 7.7 percent. CSU San Luis Obispo is the closest, reporting 7.5 percent. The campuses with the fewest number of students transferring out of the first campus and continuing at a second CSU campus are CSU Fresno and CSU Northridge, at 2.1 percent and 2.3 percent, respectively. **The average for the entire CSU system in this category is 4.4 percent.**

(3) SSU is above average for CSU campuses in terms of students transferring to a community college or UC campus. **The average for the entire CSU system is 59.2 percent**, and SSU’s rate is 62.1 percent. The campuses that have the lowest rates of students transferring to community colleges and UC campuses to continue their education are Stanislaus and Long Beach at 50.8 percent and 52.5 percent. The campuses that have the highest rates of students transferring to community colleges and UC campuses to

continue their education are San Marcos and Sacramento at 71.3 percent and 63.2 percent.

(4) Finally, no CSU campus reported a smaller percentage of students starting in the fall 2002 who did not graduate six years later continuing at the home campus than SSU. In fact, only 4.3 percent of those 610 first-time freshmen who began at SSU in the fall 2002 and who are still continuing toward their degree are doing so at SSU. This is the figure most unique to SSU among the 22 CSU campuses. For example, 23.3 percent of the first-time freshmen who began at CSU San Jose in the fall 2002 and did not graduate during the six-year period are continuing toward their bachelor's degree at CSU San Jose. And 27.0 percent of the first-time freshmen who began at CSU Long Beach in the fall 2002 continued toward their bachelor's degree at CSU Long Beach in the fall 2008. **The average for the entire CSU system in this category is 14.8.**

What these graduation statistics point out, among other things, is that SSU has a more difficult time holding on to successful, home-grown students than other CSU campuses. A higher percentage of students who start at SSU, that is to say, end up continuing at community college campuses, and/or graduating from other CSU and UC campuses (although the numbers for transferring from CSU campuses to UC campuses are fairly small). Given the debate concerning SSU's ethnic diversity, these general statements spark a more specific inquiry: Does SSU have a more difficult time holding on to students of color than other CSU campuses?

### **Ethnicity and the Six-Year Graduation Rate**

#### Category 1

As we have already seen, 7.2 percent (87 total students) of the 1,210 first-time freshmen beginning at SSU in the fall 2002 semester transferred from SSU to another CSU campus and graduated from that second campus (Category 1). Of those 87 students, 15.0 percent identified themselves as having Hispanic ethnicity; 9.2 percent identified themselves as having Asian/Pacific Islander ethnicity; no students identifying themselves as having black ethnicity graduated at a second CSU campus. Of those 87 students, 63.2 percent identified themselves as having white ethnicity, and 12.7 percent chose not to disclose their ethnic identity.

CSU Chico: 5.1 percent (101 total students) of the 1,995 first-time freshmen beginning at Chico in the fall 2002 semester transferred from Chico to another CSU campus and graduated from that second campus. Of those 101 students, 7.9 percent identified themselves as having Hispanic ethnicity; 5.0 percent identified themselves as having Asian/Pacific Islander ethnicity; 2.0 percent identified themselves as having black ethnicity graduated at a second CSU campus. Of those 101 students, 74.3 percent identified themselves as having white ethnicity, and 10.9 percent chose not to disclose their ethnic identity.

CSU Fresno: 2.6 percent (58 total students) of the 2,189 first-time freshmen beginning at Fresno in the fall 2002 semester transferred from Fresno to another CSU campus and graduated from that second campus. Of those 58 students, 15.5 percent identified themselves as having Hispanic ethnicity; 8.6 percent identified themselves as having Asian/Pacific Islander ethnicity; 5.2 percent identified themselves as having black ethnicity graduated at a second CSU campus. Of those 58 students, 22.5 percent identified themselves as having white ethnicity, and 13.8 percent chose not to disclose their ethnic identity.

**Table 1:** Summary of Data: Students that Graduated in Six Years or Less from a 2<sup>nd</sup> CSU First-Time Freshmen Entering in Fall 2002 Total and First-Time Freshmen by Ethnicity

<b>Ethnicity</b>	<b>SSU Total</b>	<b>Transferred and Graduated</b>	<b>Chico Total</b>	<b>Transferred and Graduated</b>	<b>Fresno Total</b>	<b>Transferred and Graduated</b>
<b>Hispanic</b>	12.2	15.0	11.7	7.9	26.1	15.5
<b>Asian</b>	5.1	9.2	5.0	5.0	14.9	8.6
<b>Black</b>	1.4	0.0	2.1	2.0	6.8	5.2
<b>White</b>	68.2	63.2	67.8	74.3	37.7	22.5
<b>All</b>	(1,210)	100.0	(1,995)	100.0	(2,189)	100.0

Table 1 illustrates that students of color transfer from SSU and graduate within six years from other CSU campuses at a higher rate than students of color at CSU Chico and CSU Fresno. For example, even though 12.2 percent of the total entering class of 2002 identified themselves as Hispanic, 15.0 percent of the students who transferred from SSU to other CSU campuses were Hispanic.

### Category 2

As suggested above (Category 2), 7.7 percent (47 total students) of those 610 first-time freshmen (50.4 percent of the whole class) starting at SSU in the fall 2002 semester who did not graduate in six years continued their education at a second CSU campus, not SSU. Of those 47 students who transferred to a second CSU campus, 8.5 percent identified themselves as having Hispanic ethnicity, 10.6 percent identified themselves as having Asian/Pacific Islander ethnicity, and no students identifying themselves as having black ethnicity continued their education at a second CSU campus. Of those 47 students 61.7 percent identified themselves as having white ethnicity, and 19.1 percent chose not to disclose their ethnic identity.

CSU Fullerton: 3.9 percent (66 total students) of the 1,677 first-time freshmen (51.4 percent of the whole class) starting at Fullerton in the fall 2002 semester who did not graduate in six years continued their education at a second CSU campus, not Fullerton. Of those 66 students who transferred to a second CSU campus, 28.8 percent identified themselves as having Hispanic ethnicity, 18.2 percent identified themselves as having Asian/Pacific Islander ethnicity, and 3.0 percent identified themselves as having black ethnicity continued their education at a second CSU campus. Of those 66 students

33.3 percent identified themselves as having white ethnicity, and 15.2 percent chose not to disclose their ethnic identity.

CSU Northridge: 2.3 percent (48 total students) of the 2,095 first-time freshmen (58.9 percent of the whole class) starting at Northridge in the fall 2002 semester who did not graduate in six years continued their education at a second CSU campus, not Northridge. Of those 48 students who transferred to a second CSU campus, 29.2 percent identified themselves as having Hispanic ethnicity, 10.4 percent identified themselves as having Asian/Pacific Islander ethnicity, and 29.2 percent identified themselves as having black ethnicity continued their education at a second CSU campus. Of those 48 students 18.8 percent identified themselves as having white ethnicity, and 8.3 percent chose not to disclose their ethnic identity.

**Table 2:** Summary of Data: Students that Did Not Graduate in Six Years or Less First-Time Freshmen Entering Fall 2002, Transferred to 2<sup>nd</sup> CSU by Ethnicity

<b>Ethnicity</b>	<b>SSU Total</b>	<b>Continued at Second Campus</b>	<b>Fullerton Total</b>	<b>Continued at Second Campus</b>	<b>Northridge Total</b>	<b>Continued at Second Campus</b>
<b>Hispanic</b>	24.1	8.5	11.7	30.4	33.0	29.2
<b>Asian</b>	6.4	10.6	5.0	20.9	12.8	10.4
<b>Black</b>	1.8	0.0	2.1	5.2	15.2	29.2
<b>White</b>	63.1	61.7	67.8	30.9	24.2	18.8
<b>All</b>	(610)	100.0	(1,677)	100.0	(2,095)	100.0

Table 2 shows that in terms of losing students of color who do not graduate in six years to other CSU campuses, ethnicity does not appear to be a big factor in SSU’s case. In contrast, CSU Fullerton sees a higher percentage of students of color transferring to a second CSU campus to continue their studies that is represented in the overall student population: 30.4 percent of the students who transferred were Hispanic even though only 11.7 percent of the total students who did not graduate in six years were Hispanic; 20.9 percent of the students who transferred were Asian even though only 5.0 percent of the total students were Hispanic, and 5.2 percent of the students who transferred were black even though only 2.1 percent of the total students were black.

Category 3

As stated above (Category 3), 62.1 percent (379 total students) of those 610 first-time freshmen starting at SSU in the fall 2002 semester who did not graduate in six years transferred to a community college or a UC campus to continue their education. Of those 379 students who transferred to a community college or UC campus, 14.0 percent identified themselves as having Hispanic ethnicity, 6.1 percent identified themselves as having Asian/Pacific Islander ethnicity, and 2.6 percent identified themselves as having black ethnicity. Of those 379 students 62.5 percent identified themselves as having white ethnicity, and 14.0 percent chose not to disclose their ethnic identity.

CSU Humboldt: 56.7 percent (274 total students) of those 483 first-time freshmen starting at Humboldt in the fall 2002 semester who did not graduate in six years transferred to a community college or a UC campus to continue their education. Of those 274 students who transferred to a community college or UC campus, 16.1 percent identified themselves as having Hispanic ethnicity, 5.8 percent identified themselves as having Asian/Pacific Islander ethnicity, and 6.6 percent identified themselves as having black ethnicity. Of those 274 students 52.2 percent identified themselves as having white ethnicity, and 13.9 percent chose not to disclose their ethnic identity.

CSU Long Beach: 52.5 percent (682 total students) of those 1,300 first-time freshmen starting at Long Beach in the fall 2002 semester who did not graduate in six years transferred to a community college or a UC campus to continue their education. Of those 682 students who transferred to a community college or UC campus, 28.2 percent identified themselves as having Hispanic ethnicity, 23.3 percent identified themselves as having Asian/Pacific Islander ethnicity, and 8.4 percent identified themselves as having black ethnicity. Of those 682 students, 29.3 percent identified themselves as having white ethnicity, and 8.2 percent chose not to disclose their ethnic identity.

**Table 3:** Summary of Data: Students that Did Not Graduate in Six Years or Less First-Time Freshmen Entering in Fall 2002, Transferred to a JC or UC by Ethnicity

<b>Ethnicity</b>	<b>SSU Total</b>	<b>Continued CC or UC Campus</b>	<b>Humboldt Total</b>	<b>Continued CC or UC Campus</b>	<b>Long Beach Total</b>	<b>Continued CC or UC Campus</b>
<b>Hispanic</b>	24.1	14.0	15.7	16.1	25.8	28.2
<b>Asian</b>	6.4	6.1	4.6	5.8	24.4	23.3
<b>Black</b>	1.8	2.6	5.4	6.6	5.8	8.4
<b>White</b>	63.1	62.5	54.4	52.2	32.5	29.3
<b>All</b>	(610)	100.0	(483)	100.0	(1,300)	100.0

Table 3 shows that in terms of losing students of color who do not graduate in six years to community college and UC campuses, in SSU's case ethnicity does not appear to be a big factor. This is also the case at CSU Humboldt and CSU Long Beach, except in the case of black students at both campuses to a fairly small degree: 6.6 percent of the Humboldt students and 8.4 percent of the Long Beach students who did not graduate in six years and who transferred to a community college or UC campus were black even though 5.4 percent of total Humboldt students and 5.8 percent of total Long Beach students who transferred to community college or UC campuses were black.

#### Category 4

Finally, 4.3 percent (26 total students) of those first-time freshmen starting at SSU in the fall 2002 semester who did not graduate in six years continued their education at SSU (Category 4). Of those 26 students who continued their education at SSU, 23.1 percent identified themselves as having Hispanic ethnicity, 3.8 percent identified themselves as having Asian/Pacific Islander ethnicity, and no students identifying themselves as having black ethnicity continued their education at SSU after six years. Of

those 26 students, 61.5 percent identified themselves as having white ethnicity, and 11.5 percent chose not to disclose their ethnic identity.

CSU Los Angeles: 16.7 percent (163 total students) of those first-time freshmen starting at Los Angeles in the fall 2002 semester who did not graduate in six years continued their education at Los Angeles. Of those 163 students who continued their education at Los Angeles, 57.7 percent identified themselves as having Hispanic ethnicity, 25.8 percent identified themselves as having Asian/Pacific Islander ethnicity, and 10.4 percent identified themselves as having black ethnicity. Of those 163 students, 4.9 percent identified themselves as having white ethnicity, and 8.6 percent chose not to disclose their ethnic identity.

CSU Pomona: 17.1 percent (227 total students) of those first-time freshmen starting at Pomona in the fall 2002 semester who did not graduate in six years continued their education at Pomona. Of those 227 students who continued their education at Pomona, 27.8 percent identified themselves as having Hispanic ethnicity, 37.0 percent identified themselves as having Asian/Pacific Islander ethnicity, and 6.6 percent identified themselves as having black ethnicity. Of those 227 students, 18.9 percent identified themselves as having white ethnicity, and 7.9 percent chose not to disclose their ethnic identity.

**Table 4:** Summary of Data: Students that Did Not Graduate in Six Years or Less First-Time Freshmen Entering in Fall 2002, Remained at Original CSU Campus

<b>Ethnicity</b>	<b>SSU Total</b>	<b>Continued at Home Campus</b>	<b>Los Angeles Total</b>	<b>Continued at Home Campus</b>	<b>Pomona Total</b>	<b>Continued at Home Campus</b>
<b>Hispanic</b>	24.1	23.1	52.8	55.2	27.2	27.8
<b>Asian</b>	6.4	3.8	12.8	23.3	33.2	37.0
<b>Black</b>	1.8	0.0	15.2	6.7	4.7	6.6
<b>White</b>	63.1	61.5	6.6	4.9	22.5	18.9
<b>All</b>	(610)	100.0	(975)	100.0	(1,327)	100.0

Table 4 shows that students of color who do not graduate in six-years are slightly less likely to continue their studies at SSU, but the same is true of white students. Trends in this category are more extreme at CSU Los Angeles: Hispanic and Asian students stay at CSU Los Angeles at higher rates than the total percentage of Hispanic and Asian students who do not graduate within six years. The reverse is true of black students and white students at CSU Los Angeles: Only 6.7 percent of black students and 4.9 percent of white students stayed at CSU Los Angeles even though 15.2 percent and 6.6 percent, respectively, of the total number of students who did not graduate in six years were black and white, respectively.

### **One- and Two-Year Retention Rates**

Although the transfer behavior of SSU students is not as clearly reflected in the one-year and two-year retention rate data, these retention data support what we find in the

six-year graduation rate; namely, that SSU has a harder time holding onto students than most other CSU campuses. Of the 1,210 first-time freshmen starting at SSU in the fall 2002, **76 percent** continued their studies at SSU during the fall semester 2003. This percentage went down, of course, for the two-year retention rate. Of the freshmen starting at SSU in the fall 2002, only **63 percent** continued their studies at SSU during the fall semester 2004.

Compared to the other 22 CSU campuses, SSU reports somewhat below-average retention rates. The one-year retention rate for first-time freshmen starting in fall 2002 system wide is 78 percent (compared with SSU's **76 percent**). The two campuses that report the highest one-year retention rates for first-time freshmen starting in the fall 2002 are CSU San Luis Obispo and CSU Long Beach, at 89 percent and 86 percent, respectively. The two campuses that report the lowest one-year retention rates are CSU Dominguez Hills and CSU Humboldt, at 62 percent and 72 percent, respectively.

SSU's two-year retention rate is **63 percent**. The CSU system wide two-year retention rate is 68 percent. The two campuses that report the highest two-year retention rates for first-time freshmen starting in the fall 2002 are again CSU San Luis Obispo and CSU Long Beach, at 82 percent and 78 percent, respectively. The two campuses that report the lowest two-year retention rates are CSU Monterey Bay and CSU Humboldt, at 58 percent and 59 percent, respectively.

### **Satisfaction Week**

One of the initiatives that might be unveiled and practiced during "Satisfaction Week" is the concept of "validation." Validation turns up again and again in the literature on retention and student affairs, especially when describing the struggles of nontraditional students and students at risk for not being retained. Researcher Rendón (1995) describes it this way: "Validation is an enabling, confirming supportive process initiated by in- and out-of class agents that fosters academic and personal development," (1995, p. 7). Although it may seem like a very abstract concept, many students need to be made to feel like they belong at institutions of higher learning, need to feel like their attendance is not an accident. Establishing validation at an institution is a process that must be carried over from year to year. It requires serious introspection, and it requires that many institutions change their traditional approach to student development. Organizing a campus-wide effort does require resources, but not every part of establishing validation at an institution needs to be arduous or costly. Some of Rendón's (1995) practical suggestions take very few resources—for example, practices such as calling students by name and encouraging faculty to praise students in class.

The classroom is obviously one place in which validation can make a difference, but Terenzini et al (1996) and Rendón (1995) suggest that this change in orientation should be affected not only by faculty delivering instruction but by everyone who has a stake in the institution being the best it can be. In other words, although faculty working one-on-one with students may have the largest impact, all campus officials should have some knowledge of those characteristics of the institution that cause students to stay and those characteristics of the institution that might cause students to leave, and campus

officials should emphasize the former and deemphasize the latter (Yorke & Thomas, 2003). Validation occurs, Terenzini et al (1995) wrote “when administrators, faculty, and other students all send important signals that they [students] are competent learners, that they can succeed, that they have a rightful place in the academic community, and that their background and past experiences are sources of knowledge and pride, not something to be demeaned or devalued” (p. 13).

(There will be more on “Satisfaction Week” in the final report.)

## **Data Analysis**

The data analysis has two foci. The first is to analyze a survey that was given in Spring 2009 to a random sample of students concerning their likelihood of transfer to another campus and other questions about the learning, extracurricular and lifestyle environment here at SSU. The primary data flows from the survey instrument called “What Do You Like about SSU?”. These data show potential issues in the current environment by linking those students that suggest they are leaving SSU, or considering it, with other factors. By providing their campus ID numbers, the students completing the survey can be linked to their demographic data from PeopleSoft for further analysis.

The second analysis looks at historic data, in specific the Fall 2004 entering class, and components of retention. These secondary sources of data provide ways of seeing trends in retention, comparing those trends to the literature described above, and comparing it to other CSU campuses. Some hypotheses include:

- Gender is unlikely to be a factor in retention;
- Ethnicity is likely to be a factor (being non-White is likely to reduce retention);
- Grade Point Average is likely to be a factor (as grades fall, so does retention);
- Age is likely to not be a factor;
- Income is likely to be a factor (lower incomes mean less retention);
- The availability of financial aid is likely to be a factor (the less available, the lower the retention rate);
- The failure of the EPT or the ELM or being enrolled in remedial coursework are likely to be factors (if EPT and/or ELM failure and/or in remedial work, less likely to be retained);
- The class level is likely a factor (the lower the class level, the less likely to be retained); and
- The distance from home is likely to be a factor (the farther the student is from home, the less likely to be retained).

The literature suggests that retention is difficult to analyze via standard regression analysis. The Office of Analytic Studies has looked at many of these factors and concurs with that idea. The literature suggests that drivers include how well students integrate into social life at the campus, how good their advising is from campus sources (including both academic and life counseling), and how well they perform academically. The combination of the survey data and the past demographic data helps to profile the non-retained student to add robustness.

The data will be analyzed in probabilistic models, models known as the binomial and ordered logit models. These models allow hypothesis testing with a dependent variable that is qualitative rather than quantitative. For example, was the student retained or not (from historic data) or how likely is the student to stay at SSU (from the survey data)? The latter has five possibilities (ordered variable), and was question #15 in the “What Do You Like about SSU?” survey of Spring 2009. The former is a binary variable: the student was either retained or not over one, two or four years.

What the final analyses provide is a way to drop information about a student picked at random into this model and forecast the student’s probability of retention. This model could be used for both admission management and enrollment management identifying students that may need some early assistance beyond the current infrastructure to retain them.

### **Models and Results: Spring 2009 Survey**

In Spring 2009, a survey instrument was employed to help determine the probability that students would transfer from Sonoma State University to other campuses, inside the CSU or otherwise. The survey instrument is attached as Appendix I, called “What Do You Like about SSU?”. The survey’s thrust was to provide information concerning the determinants of deciding to no longer attending Sonoma State. Are there environmental factors at SSU that provide incentives, or perhaps more importantly disincentives, to stay at SSU or transfer somewhere else? Do demographic variables suggest a higher or lower probability of retention for certain students?

The survey includes a large number of variables that are qualitative more than quantitative. For example, many survey questions were five-point, Likert scale (1 to 5, where 1 is least likely to agree and 5 represents is most likely to agree with a question generally) concerning the student’s opinion on certain aspects of campus life. Other questions asked students to match their opinion to one of many choices. Others asked students to fill in an answer. The Appendix provides the detailed data results. Finding friends, mentors, advisors, extracurricular activities, classes, and other issues were all asked of these students. From the literature described above, these questions were crafted to elicit information from students to provide evidence of why they may transfer based on their likelihood of transfer. The following is a list of the 44 questions asked, where written answers were numerically coded when possible to allow for “dummy” variables to represent certain choices, or cataloged to provide a statistical summary. In Table 5, the bolded question #15 represents the dependent variable in the regression results of Table 6. The other survey questions should be viewed as levers that drive students toward a lower (when the “Direction of Change” is negative) or higher (when the “Direction of Change” is positive) likelihood of transfer from SSU.

**Table 5: Survey Questions Summary**

Question #	Subject	Type of Question
1	SSU ID number	Fill-in
2	Gender	Binary
3	Current Major	Fill in
4	Age	Likert 5-point
5	Is the student a transfer?	Likert 5-point
6	Where did the student transfer from?	Six Choices
7	Undeclared when entering SSU?	Three Choices
8	Does student receive Financial Aid?	Binary
9	Is student a first generation student?	Binary
10	Does student live on campus?	Binary
11	Does student go home frequently?	Six Choices
12	Why does the student go home during term?	Fill-in
13	Why did the student choose SSU initially?	25 choices
14	Are there other reasons for choosing SSU?	Fill-in
<b>15</b>	<b>What is the likelihood of transfer?</b>	<b>Likert 5-point</b>
16	Why would the student transfer?	Fill-in
17	What would make the student stay?	Fill-in
18	Does student engage in extracurricular activities?	Likert 5-point
19	Number of new friends made at SSU	Likert 5-point
20	Does student study with others?	Likert 5-point
21	Has student connected with a faculty member?	Likert 5-point
22	Was a mentor found?	Binary
23	If so, who was the mentor?	Three Choices
24	Is student satisfied with variety of classes?	Likert 5-point
25	Is the student's major missing from SSU curriculum	Fill-in
26	How many hours does the student work during a week?	Three Choices
27	Does student work on campus?	Likert 5-point
28	Does the student work?	Likert 5-point
29	Does work interfere with school?	Likert 5-point
30	How much does student work support school costs?	Fill-in
31	Is student satisfied with SSU advising?	Likert 5-point
32	Is student satisfied with dept advising?	Likert 5-point
33	Is student satisfied with outside assistance in community?	Likert 5-point
34	Is student satisfied with extracurricular activities?	Likert 5-point
35	Is student satisfied generally with SSU?	Likert 5-point
36	Is student satisfied with local area?	Likert 5-point
37	Is student satisfied with the forecast for career prospects?	Likert 5-point
38	What are the career goals of the student?	Five Choices
39	Is student satisfied with their current achievements at SSU?	Likert 5-point
40	Does student need remediation?	Binary
41	Does student feel academically prepared?	Likert 5-point
42	Does student's current GPA reflect ability?	Likert 5-point
43	Does student find SSU difficult?	Likert 5-point
44	Current GPA	Likert 5-point

**Note: Question 15 acts as the dependent variable in the ordered logit analysis**

### *Results*

The ordered logit model is a non-linear model because the variable in question is a qualitative variable and thus the probabilities of choosing one of five choices is bounded by zero and one. For example, when you roll one die, the outcome represents an ordered, discrete variable. There are only six possible outcomes that ascend from one to six. The probability of each side of the die is considered equal on a fair die, equal to 1/6. In this survey, question 15 has five (5) possible outcomes concerning the likelihood of the student transferring, like a multiple choice test. The ordered logit model provides a way to estimate the probability that a student, chosen at random, would be more likely to choose an answer that reflected their more likely transfer to another institution versus other students with different characteristics or opinions. Further, the model examines the likelihood of one choice over the other and determines marginal effects of a variable on a specific category choice. The statistical software used (STATA) makes the interpretation much easier than the theory; the following tables summarize which variables had significant effects on the student's opinion of transfer from SSU.

Question 15's choices range from not likely to transfer to very likely to transfer, with intermediate choices in between (somewhat unlikely, neutral, somewhat likely). By choosing the "very likely" choice, the student is not choosing any of the other four; this is true for any of the five choices. Other variables included in the model provide explanatory reasons as to why the students would choose a specific choice. When using regression analysis to estimate "coefficients" on certain variables, the coefficients' value represents the movement of the student toward choice 1 or choice 5 (if the coefficient is negative or positive respectively).

Table 6 summarizes the variables from Table 5 that are used to explain the student's opinion about their choice to transfer. One important consideration here is that this survey is about opinion: the student is providing an insight as to their current proclivity to transfer and their perspective on other aspects of student life. Some of the questions in Table 5 do not have an ability to obtain estimates because the data are either too closely related to other variables and dropped from the analysis, or are fill-in questions which had so many different choices that they were no able to be coded efficiently for this analysis.

Because this is survey data, a simple measure of the survey's reliability is Cronbach's alpha. Reliability is a measure of the probability that if the survey were asked again, the same answers would be given by the same participants. Because these data are multidimensional and help to explain many different aspects of the student experience and their decision to transfer or not transfer, the alpha of 0.4351 for this survey is relatively low. This implies a need to further refine this survey if it were to be used again.

In short, if a question has a coefficient which is both positive and significant in Table 6, the student's answer to the specific question increases the probability of observing the "most likely" choice. It does not mean the student is more likely to transfer, it means that the student is more likely to transfer (choice "5" in question 15) than not to transfer (choice "1" in question 15).

**Table 6: Ordered Logit Regression Results, Spring 2009 Survey, Probability of Transfer**

Question (some dropped from Table 5 list due to data problems)	Direction of Change in Prob of Transfer	Significant?
Gender	+	No
Current Major	-	No
Age < 20	+	No
Age 21-22	-	No
Age 25 – 30	-	No
Is the student a transfer?	+	No
Undeclared when entering SSU?	+	No
Does student receive Financial Aid?	+	<b>Yes***</b>
Is student a first generation student?	-	No
Does student live on campus?	+	No
Does student go home frequently?	+	No
Does student engage in extracurricular activities?	-	No
Number of new friends made at SSU	-	No
Does student study with others?	+	No
Has student connected with a faculty member?	+	No
Was a mentor found?	-	No
Is student satisfied with variety of classes?	-	<b>Yes**</b>
Does student work less than 10 hours a week?	-	No
Does student work between 31 and 40 hours a week?	-	No
Does student work on campus?	-	No
Does the student work?	+	No
Does the student work off campus?	+	No
Does work interfere with school?	+	No
How much does student work support school costs?	-	No
Is student satisfied with SSU advising?	+	No
Is student satisfied with dept advising?	-	<b>Yes*</b>
Is student satisfied with outside assistance in community?	+	<b>Yes*</b>
Is student satisfied with extracurricular activities?	-	<b>Yes***</b>
Is student satisfied generally with SSU?	-	<b>Yes***</b>
Is student satisfied with local area?	-	No
Is student satisfied with the forecast for career prospects?	-	No
Is student satisfied with their current achievements at SSU?	-	<b>Yes***</b>
Does student need remediation?	+	No
Does student feel academically prepared?	-	No
Does student's current GPA reflect ability?	-	No
Does student find SSU difficult?	-	No
Current GPA	-	No

**Note: \*\*\* 1% significance, \*\* 5% significance, \* 10% significance**

Notice there are seven (7) variables that show significant effects, given the model's specification after considering the fill-in questions and other questions that were too highly correlated with included variables to be part of the larger analysis. The results that could be consider counterintuitive are: (1) that students who receive financial aid are more likely to transfer (in their own opinion) than not; and (2) that the more assistance from the outside community is available, the more likely they are to transfer. Satisfaction

with academic standing and the campus seem to drive the choice to stay at SSU, which are intuitive results. In short, SSU may want to look at which students receive financial aid and seek assistance from the community (e.g., go to a local church) and look at their demographic characteristics for further clues or ways to focus retention resources. Also, SSU wants to be sure that its commitments to student satisfaction in campus life, specifically extracurricular activities and advising, remain strong.

*Results: Second Model*

The second model is based on historic data and those students that were admitted and left SSU for various reasons. This model is much more of a classic model of retention because it does not rely on a survey instrument. In this case, the dependent variable is like a coin flip: there are two possibilities. Unlike a coin flip, the probability that a student at random will be retained must be estimated. The binomial logit model provides this estimation.

The student demographics are described by variables such as ethnicity, age, gender, and specific academic characteristics. The variables of choice here are age, gender, high school GPA, total GPA at SSU, whether or not the student is an EOP student, whether or not the student is claiming “White” as the ethnicity (answered “White” alone on the ethnicity question), the student’s entry class level, an interaction variable between race and entry class level, Entry-Level Math (ELM) status upon entry, English Proficiency Test (EPT) status upon entry, and whether or not the student claimed to be “Undeclared” as a major upon entry to SSU. Each of these models uses the odds of being retained as the dependent variable, where the “success” of the binomial trial is the student being retained.

Using data from SSU Admissions and Records on students from Fall 2004, demographic data provided some further evidence as to the type of student that is more likely to be retained. The data told the task force which students graduated, which continued to attend SSU, and which were not retained for non-academic reasons (those that were academic disqualified were eliminated from the sample, as they were not retained by institutional rules). Using a binomial, logistic regression model, where the dependent variable was whether the student was retained (dependent variable = “0”) or not (dependent variable = “1”) after one year, two years or four years depending on the model, the results were somewhat similar. As for one-year retention rates, higher GPA students are more likely to be retained. For two-year retention, GPA is significant where student class level is not; the higher the GPA, the more likely the student is retained. For four-year retention, some classic themes emerge: higher GPA, lower aged, female, lower student class, and EOP students are less likely to be retained.

In a similar way to the ordered logit model above, a positive, significant coefficient in Tables 7 through 9 on a student’s demographic characteristic suggests that the characteristic means the student is less likely to be retained. For example, in Table 7 EOP students have a positive, significant relationship with not being retained over four years. This suggests that an EOP student chosen at random is less likely to be retained than a non-EOP student chosen at random, for example.

**Table 7: Summary of Secondary Data Analysis, Fall 2004, Four-Year Retention**

Variable	Direction of Change	Significant?
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Age	+	No
Gender (Female = 1)	+	Yes***
High School GPA	+	Yes***
Cumulative GPA	+	Yes***
EOP or not?	-	Yes*
Ethnicity: White	+	Yes***
Student Class Level: Freshman	-	Yes***
Student Class Level: Sophomore	-	Yes***
Student Class Level: Junior	-	Yes***
Interaction: White & Freshman (1)	-	No
Interaction: White & Sophomore (4)	-	No
Interaction: White & Junior (2)	-	No
ELM Status: Not Required	-	Yes*
ELM Status: Passed Test	-	No
ELM Status: Remediation Needed	-	No
ELM Status: Test Required	-	Yes**
ELM Status: Exempt from Exam	+	No
EPT Status: Exempt from Exam	+	Yes**
EPT Status: Not Required	+	No
EPT Status: Passed Exam	+	Yes***
EPT Status: Remediation Needed	+	Yes***
EPT Status: Test Required	+	Yes***
Undeclared	-	Yes***

**Note: \*\*\* 1% significance, \*\* 5% significance, \* 10% significance**

Concerning ethnicity, specific ethnicity is not a negative factor in students being retained at one, two or four years. In fact, Asian students in particular are more likely to be retained. Other ethnicities show either no relationship or significant to be retained. One result is of note, and is included in each of Tables 7 through 9. When condensing the ethnicity variable to a dichotomous variable, where all students are either “White” or not, the ethnicity data showed that a student that declared “White” was more likely to be retained than non-white students.

However, 16.3 per cent of the students declined or had no response to the “Ethnicity” demographic. When controlling for these students alone, as a subset of the non-white group, they were significantly more likely to not be retained at one and two years. It is difficult to make a claim that SSU does not retain non-white students when so many students do not provide ethnicity data. For the group that does not provide data, they are less likely to be retained. As a result, a recommendation is to strongly encourage students to provide an answer to the ethnicity question (though SSU cannot legally demand they answer with a specific ethnicity) for better tracking of retention and much more in terms of support can be focused on those groups that need support.

**Table 8: Summary of Secondary Data Analysis, Fall 2004, One-Year Retention**

Variable	Direction of Change	Significant?
Age	+	No
Gender (Female = 1)	+	Yes*
High School GPA	+	Yes***
Cumulative GPA	+	Yes***
EOP or not?	+	No
Ethnicity: White	+	Yes***
Student Class Level: Freshman	+	No
Student Class Level: Sophomore	+	Yes***
Student Class Level: Junior	+	Yes*
Interaction: White & Freshman (1)	-	No
Interaction: White & Sophomore (4)	-	No
Interaction: White & Junior (2)	-	No
ELM Status: Not Required	+	No
ELM Status: Passed Test	+	No
ELM Status: Remediation Needed	+	No
ELM Status: Test Required	-	No
ELM Status: Exempt from Exam	+	No
EPT Status: Exempt from Exam	-	Yes**
EPT Status: Not Required	-	Yes*
EPT Status: Passed Exam	-	No
EPT Status: Remediation Needed	-	No
EPT Status: Test Required	-	No
Undeclared	-	Yes***

**Note: \*\*\* 1% significance, \*\* 5% significance, \* 10% significance**

Over two years, first-time freshmen are less likely to be retained. Over one year, first-time freshman, transfers, and transitory (foreign exchange) students are all more likely to be retained. The epicenter of this issue is in returning students, who are sophomores and up. The basis of admission provides not significant relationships to retention. Concerning ELM and EPT status, when proficiency demonstrated for the ELM, students are less likely to be retained over one-year; for EPT, proficiency demonstrated is significant to non-retained students over two years. If students fail the EPT, they are less likely to be retained over two years.

The declared major of incoming students was condensed to those that declared a major and those that did not. Those that chose a major upon entry to SSU are more likely to be retained than those who are undeclared for all retention rates examined. This is intuitive as the choice to declare a major is a choice of focus and having the goal in sight. Some students may change their major many times, the essence of a liberal arts campus with a vibrant GE program. However, initial declaration provides some initial focus and connection to the institution. There was insufficient data to connect financial aid to retention without statistical problems.

**Table 9: Summary of Secondary Data Analysis, Fall 2004, Two-Year Retention**

Variable	Direction of Change	Significant?
Age	+	No
Gender (Female = 1)	+	No
High School GPA	+	Yes***
Cumulative GPA	+	Yes***
EOP or not?	+	No
Ethnicity: White	+	Yes***
Student Class Level: Freshman	+	Yes***
Student Class Level: Sophomore	+	Yes***
Student Class Level: Junior	+	Yes***
Interaction: White & Freshman (1)	-	No
Interaction: White & Sophomore (4)	-	No
Interaction: White & Junior (2)	-	No
ELM Status: Not Required	-	No
ELM Status: Passed Test	-	No
ELM Status: Remediation Needed	+	No
ELM Status: Test Required	-	No
ELM Status: Exempt from Exam	+	No
EPT Status: Exempt from Exam	+	No
EPT Status: Not Required	-	No
EPT Status: Passed Exam	+	No
EPT Status: Remediation Needed	+	No
EPT Status: Test Required	+	Yes*
Undeclared	-	Yes***

**Note: \*\*\* 1% significance, \*\* 5% significance, \* 10% significance**

## Conclusions

The specific causes of why student leave or stay are as varied as every student that sits in a class; the general reasons may be discernible from both survey and student data. Baseline data is discussed and analyzed in this report, where retention data across California State University (CSU) campuses are compared to SSU. These simple comparisons show that SSU has strong retention on six-year graduation rates, but has one of the highest rates of students transferring to community colleges and University of California (UC) campuses in the CSU system. Concerning ethnicity, SSU retains a diverse student body once they start here; there is not a large migration away from SSU as compared to other, more urban campuses. Also, SSU tends to graduate students from diverse, ethnic backgrounds more regularly than other campuses.

Task Force members feel strongly that the university should designate one week of the academic year as “Satisfaction Week.” During this week, activities and events will be scheduled to the purpose of stimulating a campus-wide discussion on what is attractive about SSU from a retention standpoint and what is not attractive about SSU, what are those qualities about our campus, that is to say, that might cause students to stop attending classes or cause them to transfer to another institution. Because this is the week that we will run the “What Do You Like about SSU?” survey instrument in order to continue gathering data on retention matters and measure how we are doing in addressing

those characteristics of SSU that do cause students not to be retained, “Satisfaction Week” should happen some time during the middle of the spring semester.

## **Recommendations**

In Spring 2009, a survey was compiled and administered to a random sample of SSU students. The survey asked a question concerning the potential of the surveyed student transferring to another institution, and thus not being retained by SSU. Using a multinomial logistic regression model, where the question of potential transfer is the dependent variable, other questions and student demography were used to see what may influence students to be more likely than less likely to transfer. The results of this survey showed that students which received financial aid were more likely to transfer, possibly due to the higher cost of living in the North Bay. Also, students that thought the outside community provided good assistance and connections were more likely to transfer. This may be due a perceived lack of assistance and connections on campus in comparison. More intuitively, if students were satisfied with their academic progress, the variety of classes, extracurricular activities, department advising, and SSU generally were less likely to transfer. Many other variables, as shown in Table 6, had no significant relationship with the possibility of transfer versus a lower likelihood.

Given these results, the following recommendations are made to the administration, faculty and staff of Sonoma State University to increase retention rates:

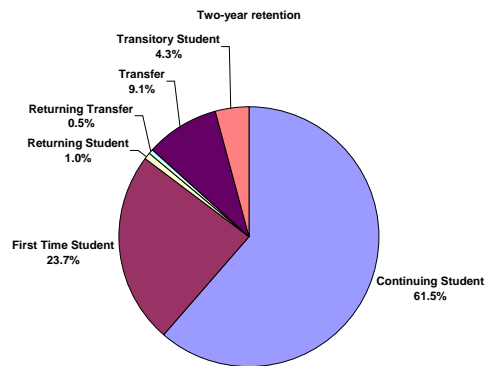
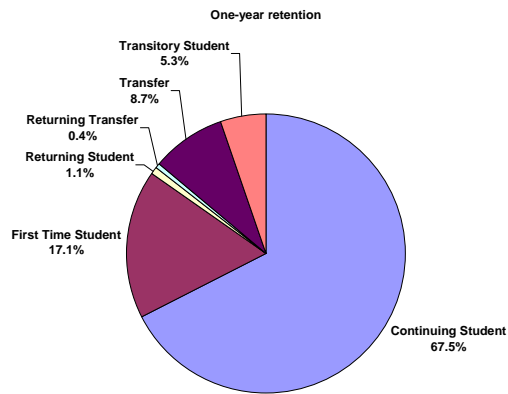
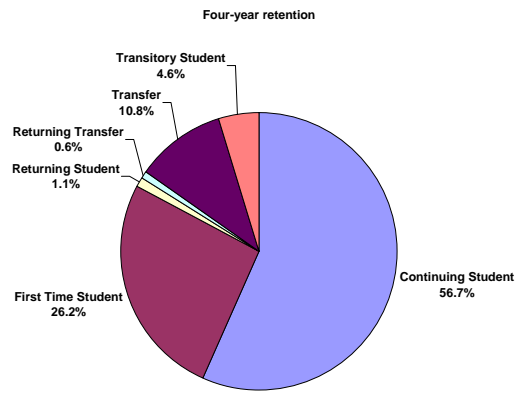
- **Hold a “Satisfaction Week,” featuring campus-wide celebrations and events describing SSU’s uniqueness and why students stay here;**
- **Make retention monitoring a systematic exercise through a joint venture of Analytic Studies and a committee comprised of staff and faculty;**
- **Encourage or require students to declare a major earlier in their matriculation**
  - **Advising during orientation or a student’s first-year on campus should encourage major declaration and focus as possible;**
- **Consider more support and monitoring for students admitted who are**
  - **EOP students;**
  - **Required to take the EPT exam; and**
  - **Exempt from the ELM exam;**
- **Survey Asian students specifically and find out why they find SSU attractive;**
- **Strongly encourage students admitted to SSU to declare an ethnicity;**
- **Archive and collect a robust data set; and**
- **Expand analysis to include financial aid data as possible.**

## Sources

- Bean, J.B., & Metzner, B.S. (1985). A conceptual model of non-traditional undergraduate student attrition. *Review of Educational Research*, 55 (4), 485-540.
- Rendon, L. I. (1995). *Facilitating retention and transfer for first-generation students in community colleges*. Paper presented at the Rural Community College Initiative, Espanola, NM., 1-12.
- Seidman, A., (ed.) (2005). *College student retention: formula for student success*. Westport, CT: ACE/Praeger.
- Seidman, A. (2005). Where we go from here: a retention formula for student success. In *College Student retention: formula for student success*. Ed. A. Seidman, 295-316. Westport, CT: ACE/Praeger.
- Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1995). *First-generation college students: Characteristics, experiences, and cognitive development*. Paper presented at the meeting of the Association for Institutional Research, Boston, MA, 1-30.
- Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education*, 37, 1-22.
- Tinto, V. (1993). *Leaving college*. Chicago: The University of Chicago Press.
- Wadsworth, Cengage Learning Center (2001). College Success Factors Index. Retrieved on May 21, 2009 from [http://www.csfi-wadsworth.com/ad\\_factormenu.htm](http://www.csfi-wadsworth.com/ad_factormenu.htm).
- Witt, P., & Handal, P. (1984) Person-environment fit: Is satisfaction predicted by congruency, environment, or personality? *Journal of College Student Personnel*, 25, 503-512.
- Yorke, M., & Thomas, L. (2003). Improving the retention of students from lower socio-economic groups. *Journal of Higher Education Policy & Management*, 25(1), 63-74.

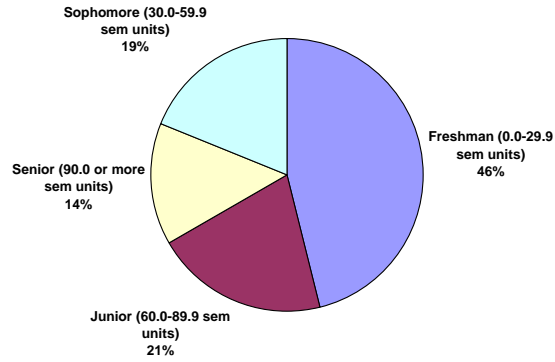
# Appendix Graphs, Charts and Data

## Retention and Enrollment Status upon Entry, Fall 2004

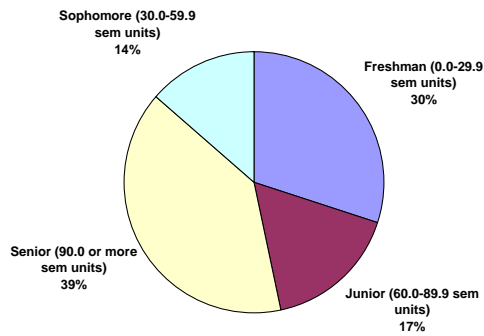


## Appendix (cont.) Retention and Class Level upon Entry, Fall 2004

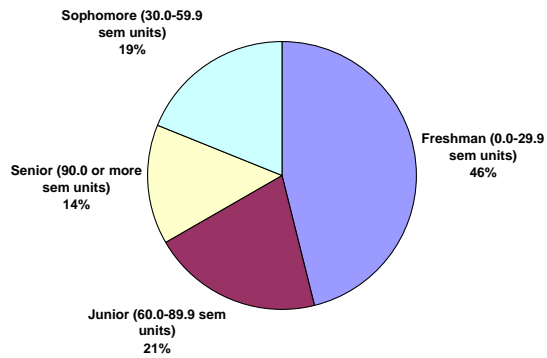
Four-year retention



One-year retention

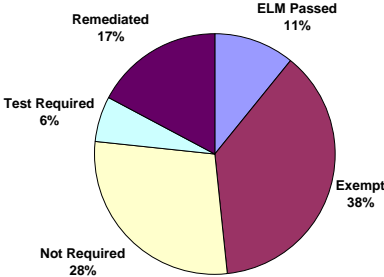


Two-year retention

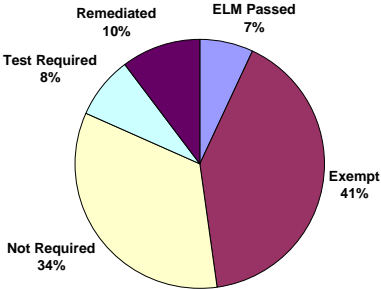


**Appendix (cont.)  
Retention and ELM Status upon entry, Fall 2004**

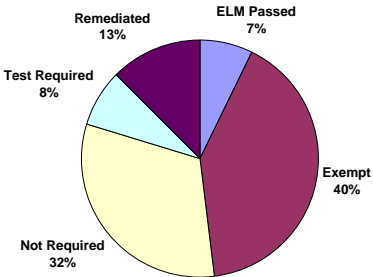
**Four-Year Retention**



**One-year retention**

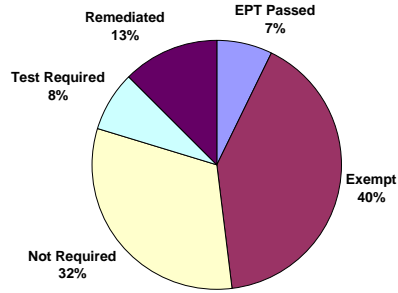


**Two-year retention**

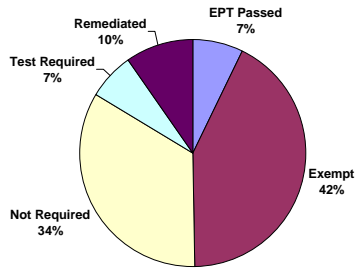


**Appendix (cont.)  
Retention and EPT Status upon entry, Fall 2004**

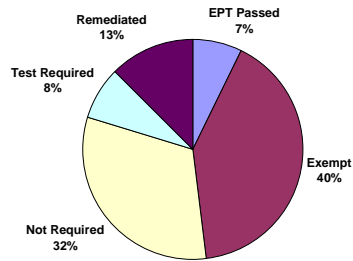
**Four-year retention**



**One-year retention**

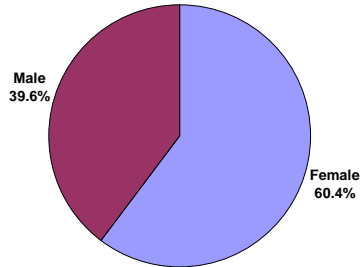


**Two-year retention**

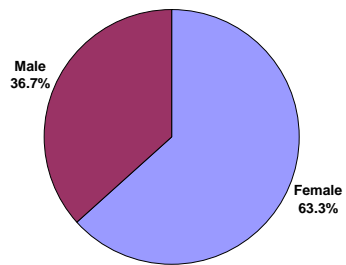


**Appendix (cont.)**  
**Retention and Gender, Fall 2004 Entry Class**

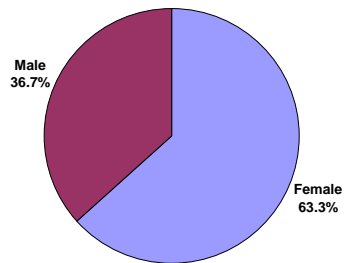
Four-year retention



One-year retention

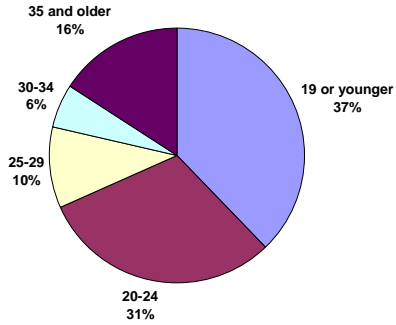


Two-year retention

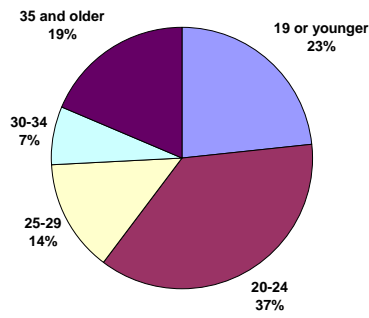


## Appendix (cont.) Retention and Age, Fall 2004 Entry Class

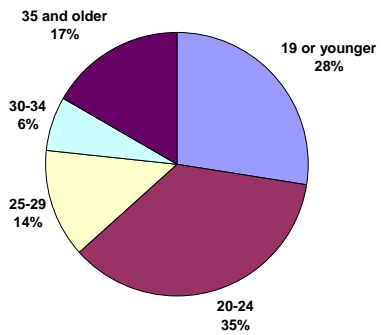
Four-year retention



One-year retention

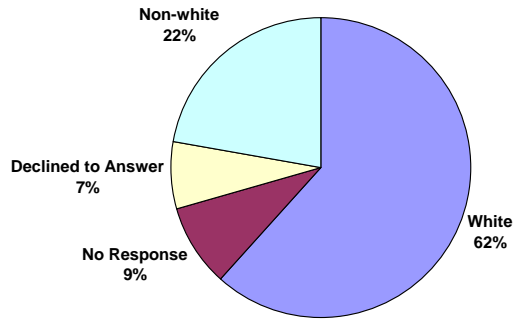


Two-year retention

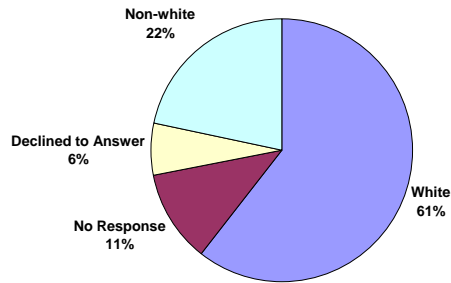


**Appendix (cont.)**  
**Retention and Ethnicity of Entry Class, Fall 2004**

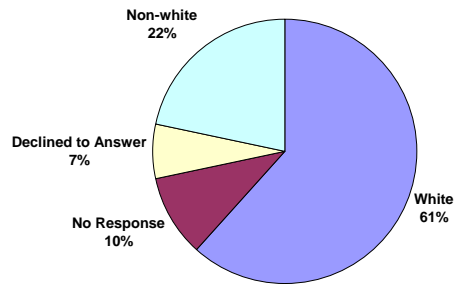
Four-year retention



One-year retention

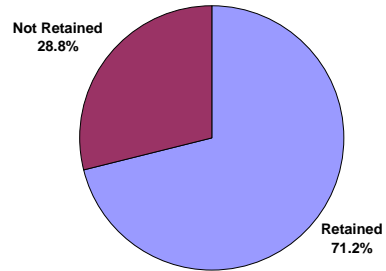


Two-year retention

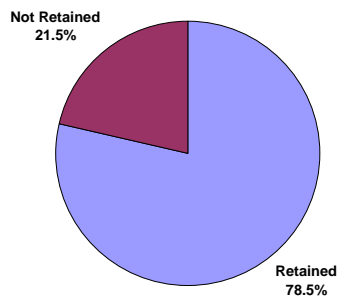


**Appendix (cont.)**  
**Retention and EOP Status upon entry, Fall 2004**

Four-year Retention



One-year Retention



Two-year Retention

