Student Retention and Graduation

The purpose of this article is to provide a summary of relevant information focusing on a single issue – improving student retention and graduation. This article provides a number of facts, studies, (a few) theories, and comments on how to improve student progress toward graduation. As a note of caution, it is important to be wary of generalizing the results of the studies presented in this article. Most scholarly studies tend to use a limited student population within a given institution. Consequently, these limited studies on retention may or may not be sufficient for a comprehensive evaluation of persistence.

What is known about Sac State’s Student Attrition?

Since the educational system in California, and rest of the country, is currently facing budget difficulty, the economic implications of alarmingly high rates of attrition are of immediate concern. The emphasis has shifted from recruitment to student retention. Research has identified various contributing factors, such as previous academic performance, intervening employment opportunity, financial difficulties, traumatic changes in circumstance to student life, mismatches between student expectations and experiences, student disorientation/socialization, as well as a variety of other factors as being key predictors of attrition. In many cases, students may be required to leave for reasons such as poor academic performance, or they may leave voluntarily despite adequate academic progress.

When considering graduation rates, Sac State is ranked as one of the leading campuses in the CSU system. Based on the information obtained from CSU Accountability Reports (November, 2002), the six-year graduation rate for Fall 1995 regularly admitted freshmen (1) at Sac State was the second highest in the system, behind CSU, San Luis Obispo. Sac State’s graduation rate at the campus of entry was 58.4 percent. When factoring in those who started at Sac State but graduated from another CSU campus, the rate increases to 65.3 percent. The first-year continuation rates for Sac State’s Fall 1995 regularly admitted freshmen, however, were ranked 13th among the 23 CSU campuses.

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admitted freshmen that exceeded 60 percent in Fall 2002, we know that CSU’s success in graduating students is comparable to and sometimes even better than- that of peer institutions. Nevertheless, we also know that almost all undergraduates enter the CSU system intending to get a bachelor's degree; yet 40 percent never earn a degree at a CSU and a third never earn a bachelor’s degree from any college whatsoever. This issue represents an unfulfilled commitment of substantial time and money made by tens of thousands of students, as well as by California’s taxpaying citizens. On a more positive note, improved graduation rates would significantly benefit California’s students, the state economy and society as a whole.

Tinto (1993) suggests that the majority of new students entering higher education leave their initial college of choice without completing a degree. National attrition rates have been increasing at two-year and four-year colleges, both public and private, since the early 1980s (Postsecondary Education Opportunity, 2002). According to ACT (2001), two-year colleges have higher attrition than four-year colleges or universities, public universities have higher attrition than private universities, and relatively “open” admission universities have higher attrition than more selective universities.

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(1) About 74 percent of all first-time freshmen entered in Fall 1995 with regular admission
The first year of college continues to be the most critical stage of vulnerability for student attrition at all institutions of higher education, including highly selective colleges and universities (Learning Slope, 1991). More than half of all students who withdraw from college do so during their first year (Consortium for Student Retention Data Exchange, 1999), resulting in a first-year attrition rate of more than 25 percent at four-year institutions (ACT, 2001). Thus, the seeds of leaving university tend to be planted early. According to Peter Ewell, an expert on higher education assessment and VP of National Center for Higher Education Management Systems (NCHEMS), universities will lose half of their students either physically or psychologically by the end of the first semester.

- Nearly 25 percent of our first-time freshmen left and did not return by the beginning of their second year. This rate has remained steady over the past six years despite the fact that enrollment has been increasing (more than 64 percent for all first-time freshmen and 80 percent for regularly admitted). In comparison to the system-wide rate, as shown in Figure 1, the retention rate for Sac State’s first-time freshmen has been lower since Fall of 1996.

- The NCES study (1997, 1998) suggested that full-time enrollment is associated with a higher rate of retention. As indicated in Table 1, Sac State’s full-time student retention rate at the end of the 1st year (77.9 percent) and 5th year (54.7 percent) has consistently been much higher than that of part-time students (52.3 percent and 29.8 percent respectively). Almost all first-time freshmen (92 percent) enrolled full time during their first semester.

- According to Cabrera, Nora and Castañeda (1993), important factors influencing college persistence are the student’s intention to persist, college GPA, and the institutional commitment to the student. For students with GPAs under 2.00 at the end of their first year, more than 62.7 percent have left Sac State without degrees after 5 years.

- High school GPA and high school class rank are the best predictors of persistence and attrition (Fetters, 1987; Pantages and Creedon, 1978; Astin, 1975). More than 81.8 percent of entering students with high school GPAs lower than 2.00 have left Sac State without degrees after 5 years.

- Placement in remedial classes is based on CSU system-wide tests; the English Placement Test (EPT) and Entry Level Math Test (ELM). Approximately 61 percent of all Sac State’s entering freshmen need some level of remediation (15.2 percent needs remediation Math; 13.1 percent needs remediation English; 32.7 percent needs both). Most students complete their remedial requirement in their first year. Students needing only single remediation (either Math or English) have higher 5th year retention rate than those who are exempted.
According to a report from ACT (2001), the national trend for first-year college students who return for their second year has increased for the fourth consecutive year. This trend suggests that new college students may be better prepared, either academically or financially, better able to cope with campus life, or are enrolling in more courses at their level of readiness. However, at the other end of college experience, the percentage of undergraduates completing bachelor's degrees within six years has fallen to a new low. The NCES study (1997) suggests that students seeking a bachelor's degree who initially enroll at a two-year institution (with the intent to transfer to a four-year institution) are far less likely than individuals who start out at a four-year institution to obtain a bachelor's degree. For students who do complete a bachelor's degree, those who start at a two-year institution are twice as likely to take more than six years to complete their degree. Further discussion regarding such a concern is beyond the scope of this article. However, the next issue of the OIR Bits will provide more inside information about retention, graduation, and the student characteristics of our undergraduate transfers.

Almost all entering freshmen who graduate from Sac State do so within six years. Less than 1 percent of the entering class graduates after eight years. As indicated in Figure 2, the six-year graduation rate for Sac State's natives has significantly decreased, from 44.1 percent in 1989 to 36.6 percent in 1997. Note that natives are those who began their freshmen year at Sac State and do not have prior academic records from other two or four-year institutions.

The average time to degree for first-time freshmen who graduate is 5 years. Table 2 indicates that more than half (55.6 percent) of all first-time freshmen who have not yet graduated after 8 years have either left school or have enrolled somewhere else.

Regularly admitted students graduate much faster than exceptional or alternate admits. After 8 years, half of those who were regularly admitted graduate.

Students who enroll full-time are more likely to graduate than are part-time students during an 8 year period.

Evidence suggests that those who earn a high GPA at the end of their first year of college are significantly more likely to graduate. More than 80 percent of students with a GPA of 3.00 or higher graduate within 8 years or less from Sac State.

The chances of completing college within 6 to 8 years varies widely according to the student’s level of academic preparation. Those who earn an high grade point average (3.00 or higher) in high school have six and eight year completion rates of 47.1 percent and 53.5 percent, respectively, compared to rates of only 0.5 percent (six year) and 5.5 percent (eight year) for those with low grade point averages (less than 2.00) in high school.
More about Student Attrition

Attrition comes in many forms. Some students, having registered for classes, fail to appear for those classes once the course actually begins; others withdraw during the first week or two of classes.

Some students register for courses in one semester and then withdraw in another. Others may be continuously enrolled for two or more academic semesters or years of study, and then “disappear” from the student body. In a few extreme cases, students who are a single course short of their degree withdraw from their studies.

In order to more fully understand graduation patterns, Figure 3 shows the following groups of students: a) those who graduate, b) those who are still in the “pipeline,” and c) those who “leave.”

Historically, less than 1 percent of an entering class graduates after eight years.

Over the past decade, approximately 9 percent of entering class students were still enrolled after seven years, 3 percent after the eighth year, and less than 1 percent thereafter.

A majority of entering students (about 54 percent) disappear by the end of the eighth year.

The term “leave” is used to describe the actions of all students who depart. Some stop-out and re-enroll at a later time. Many transfer-out to either 2 or 4-year institutions. Very few disappear or drop-out without our knowing what happened to them.

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Problems Understanding Attrition

Students transferring from one four-year institution to another four-year institution can get lost in the statistical shuffle of reporting retention (Mallette and Cabrera, 1991). The NCES Study (1998) suggested that of the students who left a four-year school during their first year, two-thirds would return; either to a two-year or four-year school, and one-third would fail to return to any school within five years.

In Fall 2003, the Office of Institutional Research conducted a special study using the National Student Clearinghouse’s database (2) to track the Sac State first-time freshmen classes of 1995, 1996, and 1997. This study found that about 24 percent of first-time freshmen leave after their first year. Of those who left, 80 percent transferred to either to a two-year school (62 percent) or four-year school (18 percent) within six years. About 13 percent of those transfer-outs had returned to Sac State at any point during an 8 year period. Only 20 percent had failed to return to any school within six years. Table 3 below lists the top ten two-year and four-year schools that our first-time freshmen transferred to at the end of their first year at Sac State.

Urban Myths about Progress to Graduation

In Spring 2003, Academic Affairs conducted a study of the factors influencing progress to graduation using the Sac State’s graduating classes of 2001 and 2002. The results of this study indicate that:

- The average total units toward graduation completed by California Community College (CCC) transfers (141.9 units) were not much greater than the average for students who entered as first-time freshmen (139.1 units).

- In examining the units actually completed, with courses taken at Sac State CCC transfers took about nine units more than the minimum 120 units required for graduation. Whereas, first-time freshmen completed about six units more than the minimum. In other words, the State of California is only paying for two to three Sac State classes beyond the minimum required for a student to graduate.

- Poor advising at California Community Colleges does not appear to be causing students to take excessive numbers of units to graduation.

- The 70-unit limit on the number of community college units that can be counted toward enrollment at Sac State does not result in a wholesale loss of college credit for transfer students. The average units lost for transfers to Sac State was 7 units (2 courses).

- The effect of students changing majors is not an important factor in increasing the number of units completed toward graduation. Of those who officially changed their major, 24% changed majors once and 3.5% changed twice. The average units for all students who officially changed majors was only 0.9 higher than for those with no change.

- Students who repeat courses for which they previously received a passing grade do not significantly increase the number of units taken. In Fall 2001, there were only 238 such repeats out of a total of 105,000 course attempts (0.23 percent or 48 FTES).

(2) The National Student Clearinghouse’s database contains over 2,700 institutions that represent more than 90 percent of higher education’s total enrollment.
Much research has been done to investigate the causes of leaving and to explore ways to enhance retention. College officials are quickly to cite two issues that to a considerable extent are beyond their control: financial pressures and poor academic preparation in high school. However, according to the NCES Study (2003), the most common reasons that students gave for leaving postsecondary education without a degree or credential are listed above.

### Dropout Study and Entering Student – Longitudinal Research

At Sac State, the information available with regard to reasons for leaving college is limited to those students who completed withdrawal applications. Withdrawal procedures during the first two weeks of a semester are routine and do not require formal approval. An exit interview with an advisor is required for weeks 3-12, and approval during the final three weeks of classes is granted only for medical emergencies. The reasons undergraduate students gave for leaving Sac State during Fall 2001 are listed above.

### Reasons for Leaving:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Reasons for Leaving</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Job-related (e.g., needed to work, conflicts with Job/military)</td>
<td>32%</td>
</tr>
<tr>
<td>2</td>
<td>Family and personal reasons (e.g., conflicts at home, taking time off, change in family status)</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Other financial reasons</td>
<td>16%</td>
</tr>
<tr>
<td>4</td>
<td>Availability of classes (e.g., completed desired classes)</td>
<td>11%</td>
</tr>
<tr>
<td>5</td>
<td>Other reasons</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Academic problems</td>
<td>4%</td>
</tr>
</tbody>
</table>

Note: Respondents could give up to three reasons, excluding other reasons not listed here. Sixty-one percent identified only one of these reasons, while 24 percent did not cite any of these reasons.


Successful retention efforts are difficult to mount, mainly because of our continuing inability to make sense of the variable character of student departure. Despite an extensive body of literature which confronts the issue, there is still much that we do not know. We need to recognize “student retention” as a fundamental student outcome. It should serve as a prerequisite for the meaningful assessment of other outcomes. Joe Cusco (2002) suggests that other methods commonly used to assess student learning outcomes, such as knowledge acquisition, critical thinking, and attitude change, cannot be used to accurately measure the final outcomes of learning experience unless students have persisted to the completion of college experience. As such, centralized strategies for retention programs may be necessary. The concepts of “training, accountability, evaluation, and recognition/reward” are fundamental toward overcoming these issues. Watson Scott Swail (2004) indicates that only when sufficient institutional attention and resources are devoted to securing each of these foundational features of program development will the quest for a quality retention program be successful; it is only then that its potential to promote student success can be fulfilled.
References


Glossary of Terms

- **First-time Freshmen** – Entering undergraduates who have not earned any college academic credits since graduating from high school.
- **Full-time Equivalent Student (FTES)** – Conversion of student headcount by dividing total student credit units attempted by 15.
- **Full-time Undergraduates** – Undergraduate students who have enrolled in 12 or more units during a semester. Part-time Undergraduates – Undergraduate students who have enrolled in less than 12 units during a semester.
- **Regular Admission** – Admission basis for first-time freshmen who meet all the CSU regular admission criteria.
- **Exceptional Admission** – Admission basis that is based upon the judgment as to whether or not the applicant is as likely to succeed as a regularly admitted freshman or transfer. This judgment will include an assessment of basic skills in the English Language and mathematical computation including, but not limited to, completion of English composition and a transferable college-level math course.
- **Alternate/Other Admission** – Admission basis for first-time freshmen under a) applicants who are adult students (Section 40756) and full-time permanent or probationary employees - Section 41804e; b) veterans as defined in Section 1682, Title 38, U.S. Code - Section 40756.1; c) applicants to curricula of less than four years - Section 40757; and d) students admitted in pilot programs under Section 41250. (Between Fall 1995 and Spring 1999, the code represented regular admits who met the UC eligibility requirement.)
- **Graduation Rate** – Percent of students in the initial cohort who entered as a first-time freshman, and graduated from the institution.
- **Continuation Rate** – Percent of students who re-enroll after having enrolled during the prior regular session term.
- **Retention Rate** – Percent of the cohort of all first-time bachelor’s (or equivalent) degree-seeking undergraduate students who graduated or are still enrolled.
- **Attrition Rate** – Percent of first-time freshmen who failed to complete the academic requirements for a degree.
- **Disappearing or Drop Out** – Students who leave the institution regardless of the reasons or conditions.
- **Remedial Math** – Percent of students who are not exempt from and failed to pass the Entry Level Mathematics (ELM) Exam prior to their first semester enrollment.
- **Remedial English** – Percent of students who are not exempt from and failed to pass the English Placement Test (EPT) prior to their first semester enrollment.
Getting to know us

SUTEE: Through out the week (at bookstores, gyms, restaurants and any other place that requires that you present them with your ID) people ask the same strange questions about his last name. “How do you say that?” “Is that the longest last name or what?” “How many letters is that?” “Do you think any woman will want to use your last name when you get married?” After several years of facing these questions, his goal is to find a bride with simpler and shorter last name…maybe something like “Smith”.

Gerald Helland traveled extensively with his Army family before finally settling down in Sacramento. He had a 15-year career as a typesetter and printer before becoming a crackerjack programmer. A longtime student at Sac State, he studied Electrical Engineering, German, Mathematics, and Physics. (He also struggled a bit with microeconomics). Having worked in the OIR for the past 22 years, Gerald has worked very hard to maintain historical data files, as well as to design and produce various reports for both internal and external requests. He also generates and updates over 2,000 pages on the OIR website (www.oir.csus.edu). Being a musician, Gerald has the distinction of having performed on campus across several decades (the 60’s, 70’s, and 80’s). He is married to Sandy Helland, formerly of KCRA Channel 3 and well-known for her decades (the 60’s, 70’s, and 80’s). He is married to Sandy Helland, formerly of KCRA Channel 3 and well-known for her work in Media Services and in Teaching and Learning. Gerald enjoys mystery and science fiction novels and he loves to play Unreal Tournament on his home computer. Thus far he has worn out three keyboards doing so.

VICKII: It seems as though Vickii has spent most of her life as a part of the CSUS community. She is the spouse of a faculty member and the mother of a former student. She also received both her BA and MA in Psychology at CSUS. Vickii has four children, ranging in age from 40 to 14, which brings both great joy and interesting challenges to her life. During the last seven years she has become a stage mom to her teenage singer/dancer daughter. From this experience Vickii has become a pro at using iron-on hem tape and wields a mean glue gun. Vickii has been with the OIR for nearly 20 years. She is responsible for supporting the institutional assessment and strategic planning process thru data analysis, progress reports and other campus level assessment related assignments. To maintain the stamina that Vickii needs to keep up with all of her activities, she exercises regularly with friends in both the CSUS noon-time wellness program and her personal gym. When it comes to fun, all she needs are friends, junk food and a TV show or movie with absolutely no socially redeeming qualities, and she is a very happy camper.

CHRIS: The kind of person that always enjoyed taking things apart to see how they worked, Chris still applies much of that principle to his work. His responsibilities include anything and everything to do with being the CSUS liaison to the Chancellors Office for the Academic Reporting Data Base (aka: the reporting of faculty workload and course related data). People across campus also call Chris to talk about such things as: how to interpret and/or derive all of those vital and mysterious workload indicators, such as WTU’s, FTES, FTEF, SCU, SFR, not to mention assigned/reimbursed/administrative time, as well as ad hoc reporting of historical faculty and course section related data. When weekends and holidays come calling, Chris can be found hanging out with his wife and dog, while working around the house. Occasionally you will also catch him golfing, snow skiing, mountain biking, or working on his Masters thesis in the area of Recreation and Leisure Studies.

JON: With a three-month old son and a two-year old daughter at home, Jon looks forward to coming to work just for the few precious moments of silence and solitude that it permits. But by the end of the day he’s already missing his family and can’t wait to get home to be with them again. It’s a frantic cycle of trying to get ready for work while chasing a screaming, and often naked, two-year old (who just doesn’t understand why she can’t wear her favorite pink “footie-pajamas” to school) around the house while the three-month old wails in the background reminding you that, once again, it’s time to change him. Having come to CSUS in 2002, Jon is the most recent addition to the OIR staff. He can often be found busily coordinating several survey projects at his desk, or providing updated statistical information to various educational resources. In his free time, if someone with two young children can be said to have such a thing, Jon can usually be found hanging out on the Feather river fishing for whatever happens to be in season at the time. So, if any of you happen to have any steelheading tips, let him know...he needs all the help that he can get.