Educational Effectiveness Report

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SAN DIEGO STATE UNIVERSITY

TABLE OF CONTENTS

Page

EDUCATIONAL EFFECTIVENESS REPORT

Introduction

This report continues San Diego State University's self-study for reaccreditation with the Western Association of Schools and Colleges (WASC) by providing evidence and reflection upon key issues facing the university: (1) student learning; (2) the balance among access, retention, and graduation; and (3) the impact of participation in research, scholarship, and creative activity on undergraduate student learning. These issues emerged through an extended process at San Diego State University (SDSU) and a brief review of this process will provide the context for this report.

Entering into the new WASC self-study process in 2001, SDSU submitted its institutional proposal early in that year. After review and revision, the proposal was again submitted in October 2001 and approved by WASC in December 2001. President Weber appointed a WASC Coordinating Council during the summer of 2002 and charged them with guiding the self-study that would lead to our reaccreditation. The Coordinating Council, comprised of 20 faculty, staff, students, and administrators, met regularly and began studying the new WASC accreditation model. Building on the university's Shared Vision Statement, and through broad consultation with constituents from across campus, the Coordinating Council identified the three themes in a Working Paper that was shared widely and submitted to WASC as an addendum to the institutional proposal. The themes noted above and articulated in the working paper guided the Coordinating Council's work, and a great deal of focused effort across campus, for the next three years. This report continues to direct sustained attention at core challenges we face as a university.

When SDSU submitted the Capacity and Preparatory Review in August 2004, it described the above process and provided evidence that we have the resources, processes, and procedures in place to meet our mission. In addition, the processes and procedures we have in place operate on different levels and comprise the means through which we assure quality in teaching and learning. We have, for example, an annual academic planning process that has as one of its required elements a focus on assessment and student learning. This annual process becomes, in turn, part of the program review process that takes place on a 5-7 year cycle. At the same time, the University Senate, through its Student Learning Outcomes Committee, collects, reviews, and provides feedback on departmental assessment plans. Finally, the process through which faculty members proceed for tenure and promotion assures that careful attention is paid to teaching.

Our attention to quality teaching and learning is thus systematic and mutually reinforcing both on campus and as it impacts and reflects professional accreditation in areas such as business, nursing, education, and engineering. Our focus on teaching and learning in all of these processes requires that we collect multiple data sets (both qualitative and quantitative) but especially direct measures and examples of student work. Moreover, all of these processes require faculty to go beyond collecting data to using data to make resource decisions, to support improvement in student learning, and to ask questions about our effectiveness. We have focused our attention on these

processes in the past several years and it is through them that we have addressed the challenges we identified as the core of our self-study.

San Diego State University has a long-standing commitment to research and graduate study, as well as a commitment to undergraduate programs. And, although these commitments are not new, the university is in a transitional phase[1] as it seeks to balance and maintain both commitments. We know we will be a stronger institution if we can do so. Our self-study, which is a critical component of this transition, helps us focus on those issues—student learning; access, retention, and graduation; and undergraduate research, scholarship, and creative activity—that will enable us to make this transition successfully. We see our self-study and this report not as just a passing phase but as part of larger efforts to institutionalize at deeper levels our core commitments.

This process of institutionalization is well underway due in part to the efforts we committed to during our self-study. Once the Coordinating Council identified the focus areas outlined above, they formed three working groups that oversaw developments and activities in each area. As part of this process, they engaged faculty and staff across the university to collect evidence, to identify challenges, and to put structures and processes in place to meet those challenges. We have pursued initiatives and sought evidence that extend the kinds of discussions undertaken as part of the SDSU Shared Vision process in the 1990s and brought them in concrete ways into departments and programs across the university. The three working groups have spent considerable time in examining our educational effectiveness in each of the selected foci, working with faculty and staff, and in identifying strengths and remaining challenges.

San Diego State University's Educational Effectiveness Report is organized around three essays written to address educational effectiveness in the three themes identified as central to our mission. In each essay, we have selected examples and cases that (1) illustrate best practices, (2) underscore SDSU's core commitment to student learning, and (3) reflect the shift underway as we institutionalize this commitment. We present this report as a reflection of ongoing work. We have undertaken our self-study with the understanding that we are involved in a long-term process and consequently we see this report not as an end point or a conclusion, but as one more step in a longer, self-reflective, iterative process to which we commit as a learning organization.

The integrative essay following the three essays synthesizes common themes and issues that emerged from our work. The recommendations and steps outlined in the integrative essay are critical in helping us develop and maintain a culture of inquiry where evidence is used for decision-making that leads to improving San Diego State University through a sustained focus on student learning and student success. Our goal for the Educational Effectiveness phase of our self-study has been to provide recommendations that will

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[1] There are several ways in which our transition manifests itself. The profile of our student body has changed significantly in the past five years—students are better academically prepared now than they have ever been. Like many colleges and universities, we benefit less and less from state support as a percentage of the budget and thus have to cope with these budget concerns and seek private donations. We have sought to become more involved in our community and we have developed increasingly strong ties with external constituents. We are also in the midst of a large faculty turnover as more senior faculty members retire.

positively influence student learning and be sustained far beyond the reaccreditation process.

While some of the issues raised by the WASC Commission following the Capacity and Preparatory Review site visit in November 2004 are addressed in the body of our Educational Effectiveness Report, we address other concerns and recommendations in the appendix that follows. Overall, we are decidedly optimistic about the directions San Diego State University is taking. At the same time, we are aware of significant challenges and acknowledge that we have much work to do. Preparing our self-study for reaccreditation has reinforced both our optimism and the recognition of the challenges we face. The self-study has thus served us extraordinarily well and the reflective essays that follow illustrate our ability to make significant strides as well as to describe the path we must continue to travel.

Reflective Essay 1: The Balance Among Access, Retention, and Graduation

Introduction

Like many higher education institutions in California, San Diego State University faces significant enrollment pressures — for fall 2005, 49,000 undergraduate students applied for 8,400 slots — and we are working at the same time to improve retention and graduation rates. We have addressed these challenges in several ways, some of which we noted in the Capacity and Preparatory Review. In terms of both retention and graduation, progress has been made over the past several years, particularly for first-time freshmen. However, because the challenges we face are complex and interwoven, we wish to focus on two key student groups in this first essay — dual admit students and transfer students — to illustrate how we are seeking to improve our effectiveness through strategic approaches informed by analyzing evidence.

This essay is organized around a discussion of the effectiveness of our policies and procedures on the retention and graduation rates of dual admit students and local transfer students. We close with a discussion of the immediate and long-term challenges we face in improving the retention and graduation rates of these two groups and in relation to other efforts we have undertaken to address the broader challenge of increasing graduation rates.

The first part of the essay presents the background and rationale for the Dual Admission Program at SDSU and follows with our analysis of (1) the ethnic composition of students in this program, (2) the overall retention and continuation rates for students in the program, (3) the continuation rates by ethnicity, and (4) student perceptions of the program. The second part of the essay describes the rationale for selecting transfer students as an area of study and follows with an analysis that includes transfer student (1) academic benchmarks, (2) retention and graduation rates since 2000, and (3) student interviews.

The Dual Admission Program: Background

Access to higher education has long been a fundamental principle of California's Master Plan for Higher Education. The very structure of public higher education is predicated on the idea that every resident competent to benefit from instruction has access to an appropriate learning environment. Access to San Diego State University existed for every California State University (CSU) eligible applicant until 1999, when SDSU became the first CSU campus to be granted campus (as opposed to program) impaction.

Prior to impaction, a freshman applicant was eligible for admission based on the completion of required college preparatory courses and a 3.0 high school grade point average (GPA). An SAT or ACT score was only needed if the high school GPA was below 3.0, wherein a CSU eligibility index was calculated by multiplying high school GPA by 800 and adding the SAT I score. As long as the student's eligibility index was 2900 or higher, the applicant was admitted. If it appeared that the campus would not meet its enrollment target, "special" admission could be granted. If the campus exceeded its enrollment target, funding might or might not be available for the added

enrollment. The primary focus was on admission and rarely on retention and graduation.

In fall 1999, the first semester under campus impaction, San Diego State University was allowed to use supplemental criteria to determine admission decisions. The University Senate adopted an "80/20" admission model, meaning that 80% of students would be admitted based on academic preparation while the remaining 20% would be admitted based on supplementary criteria, including special talent, socio-economic status, and other factors. SDSU ranked all first-time freshmen (FTF) by eligibility index and determined a minimum SDSU eligibility index that would yield the number of admits that could be accommodated. That eligibility index was 3400, 500 points higher than the CSU minimum of 2900. SDSU denied admission to 3,535 FTF CSU-eligible applicants, 681 of whom were from San Diego and Imperial County. This was the first time that CSU-eligible applicants were denied access to a CSU campus. Anticipating that this was just the beginning, the Trustees appointed an <u>enrollment management</u> work group in November 1999 to develop principles to respond to access challenges caused by what was called Tidal Wave II. Foremost among the new CSU <u>enrollment management principles</u> was guaranteed access to a local campus for all minimally eligible local students.

Under impaction, the <u>academic preparation</u> of the incoming freshman class has continued to improve, but concerns about the retention and academic success of the local CSU eligible, but not SDSU eligible, FTF remained. In fall 2000 and 2001, local FTF admits who did not meet SDSU eligibility and who did not pass the English Proficiency Test (EPT) and/or the Entry Level Mathematics Exam (ELM) were required to begin their SDSU enrollment in the summer in remedial courses in writing and/or mathematics. CSU System (<u>Executive Order 665</u>) and campus policy requires students to remediate within one year or be administratively disqualified from further attendance. Requiring freshmen who fall between the CSU eligibility index and the SDSU eligibility index to begin their remediation in the summer was seen as a way to decrease the number of students who might have difficulty finishing their remediation in that time frame. The one-year continuation rate for fall 2000 local students with an eligibility index between 2900 and 3620 (the fall 2000 SDSU minimum eligibility index), excluding Equal Opportunity Program (EOP) students, was 51.9% compared to 75.3% for all other freshmen. Thus, although SDSU was providing access, retention rates were much lower than desirable for this group. Given these discouraging retention data, we realized another approach was needed.

<u>The Dual Admission Program: Implementation</u>
San Diego State University established a Dual Admission Program, which was approved by CSU Chancellor Charles Reed in December 2001, to enhance the retention of our least prepared students. This program applies to CSU eligible, but not SDSU eligible FTF applicants who have remedial needs. These students are dually admitted to SDSU and a local community college. Students in the Dual Admission Program have one year in which to complete their remediation and then enroll at SDSU. SDSU committed to the Dual Admission Program for a period of three years. A decision to continue the program after that time will be based on whether or not the program

increases retention for this cohort of students. All stakeholders (local high school students, high school principals, counselors, and Advancement via Individual Determination (AVID) instructors) were sent letters regarding the Dual Admission Program in February 2002.

The Dual Admission Program has elicited opposing views. Opponents believe that the program unfairly prohibits under-prepared students, who are more likely to be students of color, from the opportunity to begin their higher education experience at a university. San Diego State University community college partners have been equally vocal about it being only a one-year program rather than a two-year program after which students enroll at SDSU as upper-division transfer students. On the other hand, proponents point to the considerable resources that have been invested to ensure student success in the transition from the community college to SDSU. For example, students are provided with opportunities to connect with the SDSU campus and encouraged to use many SDSU services while they attend a community college. Additionally, SDSU hired a Dual Admission Program coordinator and academic adviser to ensure that these students had access to the correct information and a campus contact while attending a community college in addition to services and support (such as University Seminar classes and priority registration) for students when they enrolled at SDSU.

The Dual Admission Program: Analysis and Assessment
The next sections describe our findings regarding the effectiveness of the Dual Admission Program for the fall 2002 (N = 293), fall 2003 (N = 237), and fall 2004 (N = 200) cohorts. Due to the recency of this program, we were unable to examine graduation rates for these cohorts.

Ethnic Composition. Table 1 provides the ethnic composition of students enrolled in the Dual Admission Program versus all other FTF for the fall 2002, fall 2003, and fall 2004 cohorts. These data clearly indicate that students of color are more likely to be part of the Dual Admission Program, one of the concerns of the opponents of this program. For example, using the fall 2004 cohort, the table shows that African American (8.5% vs. 3.5%), Hispanic (31.0% vs. 19.4%), and Filipino (17.5% vs. 7.6%) students are over-represented in the Dual Admission Program, while white (25.5% vs. 51.1%) students are under-represented when compared to all other FTF. These differences are apparent in the fall 2002 and fall 2003 cohorts as well.

Continuation Rates. To examine the effectiveness of the Dual Admission Program with regard to retention [i.e., continuation rates], we selected a pre-Dual Admission Program comparison group of students from the fall 2000 cohort who remained on the SDSU campus, but whose eligibility index and remedial needs were similar to dual admit students. The ethnic composition of this group compared to the three cohorts of dual admit students for whom we have data was very similar [See Table 2]. For the purposes of this examination, continuation rate for dual admit students is defined as the percentage of students who matriculated in the fall at a local community college and continued their education at SDSU the following fall.

Table 3 provides the one- and two-year continuation rates for the fall 2002 dual admit cohort and the comparison group. As shown in Table 3, the one-year continuation rate for the dual admit students was 62.1% and the two-year continuation rate was 45.4%, while for the comparison group these rates were 51.9% and 46.4%, respectively. These data indicate that one-year continuation rates were approximately 10% higher for dual admit students than their comparison group; however, the two-year continuation rates were virtually the same. Table 4 provides one-year continuation rates for the fall 2003 dual admit cohort and the comparison group. Again, the dual admit one-year continuation rate was higher, 62.4% vs. 51.9% for the comparison group. Two-year continuation rates will not be available until fall 2005; thus, we do not know if the same pattern will occur as was evident for the fall 2002 cohort.

Continuation Rates By Ethnicity. Closer examination of Table 3 indicates that the effectiveness of the Dual Admission Program, as measured by continuation rates, may differ by ethnicity. For example, one-year continuation rates for all ethnic groups were higher for dual admit students vs. the comparison group. However, two-year continuation rates demonstrate marked variation. African-American (29.4% vs. 23.1%) and Filipino (60.0% vs. 37.5%) dual admit students had higher continuation rates than their comparison group counterparts while Hispanic (34.9% vs. 46.5%) and Other/Not Stated (38.5% vs. 48.1%) dual admit students had lower rates than their comparison group counterparts. At present we do not know if these patterns will occur in the fall 2003 cohort.

We also examined continuation rates within the Dual Admission Program by ethnicity. These data also indicate marked variation across ethnic groups. For example, the one-year continuation rate for the fall 2002 cohort of dual admit students was 62.1% overall. However, African-American (47.1%) and Hispanic (50.6%) students had lower one-year continuation rates and Filipino (78.6%) students had higher one-year continuation rates than the average of the group. Two-year continuation rates yield the same variation [See Table 3]. The fall 2003 cohort had a one-year continuation rate of 62.4%. As seen in Table 4, African-American (46.7%) and Hispanic (52.5%) students had lower one-year continuation rates while Filipino (69.4%) and white (72.1%) students had higher one-year continuation rates than the average for the group. The differential impact of the program on continuation rates by ethnicity is not easily explained but reasons might include cost, family preferences, size of school, and whether or not remedial work was completed.

Student Perceptions of the Dual Admission Program. Students who enrolled in the Dual Admission Program during its inaugural semester (fall 2002) were asked to complete a survey during the spring 2003 semester. The purpose of the survey was to assess the extent to which these students (1) utilized advising, tutoring, and mentoring programs at both the community college and SDSU, (2) felt they benefited from the remedial courses, (3) perceived the usefulness of the dual admit orientation and coordinator, (4) would recommend the Dual Admission Program to other students, and (5) had any additional ideas, suggestions, or comments about the Dual Admission Program. Of the 293 students enrolled in the Dual Admission Program in fall 2002, only 51 completed the survey in spring 2003 for a 17.4% response rate. Although the

following results may not be reflective of all students in the Dual Admission Program (fall 2002), and particularly those students who did not continue in the program, they do provide some interesting findings.

Advising was the most widely used service at both the community college (41.2%) and at SDSU (35.3%). In contrast, the percentages of students who took advantage of mentor programs were only 3.9% and 2% for the community college and SDSU programs, respectively. When asked whether they benefited from the remedial courses, 44% of the student sample felt that the classes prepared them very well with an additional 42% stating that the courses prepared them somewhat well. A majority of the students surveyed (60%) felt that the dual admit orientation they attended was very useful. In addition, a higher percentage of students (72%) believed that the dual admit coordinator was very useful. With regard to recommending the Dual Admission Program, an overwhelming majority (84%) of the 51 students surveyed stated that they would recommend the Dual Admission Program to other students.

Finally, in terms of evaluating the ideas, suggestions, and comments about the Dual Admission Program, a content analysis was performed to identify consistent themes that emerged from student written responses. In general, most of the comments were positive about being in the Dual Admission Program, particularly in terms of how the program prepared them. However, four additional themes emerged from the data. These included: (1) awareness of requirements; (2) fairness; (3) redundancy; and (4) sense of belonging.

Awareness of Requirements. Although most students understood the general idea of being dually admitted, some felt that requirements could have been more explicit. For example, one student stated: "More information needs to be given to the students about being dually admitted, and the steps needed to finish the required courses to transfer to State."

Fairness. Some students perceived that the criteria used for determining who was accepted to SDSU and who had to enroll in the Dual Admission Program were not consistently enforced. As stated by a dual admit student: "I think they should be consistent with who they let into SDSU because a friend of mine got the same score on the English exam as me and he was allowed to take remedial classes at SDSU and I had to go to community college, I was a little confused by that."

Redundancy. There was a perception that the remedial courses in the community colleges were too basic. In other words, some students felt that they were repeating what they covered in high school. As one student put it, "The class that I took at the community college was not useful. I had already taken and passed that class with a B in high school. I feel that participating in this program put me behind when I got to State because I was not told of the possible classes that I could take."

Sense of Belonging. Although one of the primary goals of the Dual Admission Program was to ensure that the students felt like they were SDSU students even though they were attending a community college, some still felt as if they were excluded:

"During my time at Cuyamaca, even though I was an SDSU student, I didn't feel like one. I felt like I was left out of all the fun of your first semester of college. Maybe some sort of reminders during the fall semester from SDSU would have been nice, just to let me know I'm still part of the school even though I'm at a JC."

In summary, while the data examined allow us to make some initial reflections on the effectiveness of the Dual Admission Program, data that will become available after census in fall 2005 will provide a more definitive picture of this program. For example, it is clear in both the fall 2002 and fall 2003 cohorts that one-year continuation rates are approximately 10% higher for dual admit students vs. the comparison group. However, with only one year (fall 2002 cohort) of data available for examining two-year continuation rates, we are unable to state with certainty whether the trends noted in the fall 2002 cohort will hold for the fall 2003 cohort. This same uncertainty can be applied to any tentative conclusions we might wish to make about the differential success of the program when examined by ethnicity.

In addition, the traditional definition of continuation rate does not provide a complete picture of the continuation of students in higher education. For example, we know that many of the dual admit students remained at the community college rather than transferring to SDSU. With the very recent acquisition of access to the National Clearinghouse StudentTracker (formerly called Enrollment Search), we now have the capability of finding out if students who begin at SDSU and leave really drop out of school or simply transfer to another school; however, we will not have these data available by the August 17 submission date for this report. These latest advances in technology will allow us to better track students who choose to leave SDSU and ascertain reasons for their leaving. This additional evidence will improve our ability to change the factors we have control over to increase student retention (and ultimately graduation) of our students.

Transfer Students: Background and Context
Under the California Master Plan, community colleges play a significant role in preparing students for later transfer to a four-year university. At SDSU we have a large number of students who do preparatory work in local community colleges. For example, in fall 2004, 3,244 students transferred to SDSU, which represents 42.3% of newly admitted undergraduate students. While we have long provided various support programs for incoming freshmen (e.g., Freshmen Success Programs, Faculty Student Mentoring Program, Educational Opportunity Program, four-year curricular maps [see Biology for an example]), support for transfer students generally has been limited to general advising sources and a transfer student orientation that has not been well attended. Over the past several years, however, Enrollment Services has addressed some needs of potential transfer students by developing web resources to assist students so they are aware of the lower division course pattern that is required for entry to SDSU.

Given that transfer students comprise approximately 40-45% of new undergraduate student admits each year, we undertook a study that focused on transfer students from community colleges in our local service area as a first step in analyzing transfer students' experiences. We examined quantitative data, including several statistical

benchmarks representative of the academic experience of transfer students, as well as retention and graduation rates. We also interviewed a random sample of transfer students about their experiences.

Local Transfer Students: Analysis

      Time and Units to Graduation. One of our concerns centered on the preparation level of students. Thus, we examined the length of time and number of units that transfer students took to complete a degree after entering SDSU. Our study examined the graduating students from three academic years, 2001-02, 2002-03, and 2003-04. The 4,939 students in the analysis arrived at SDSU with an average of 72.2 transfer units, which is greater than the maximum of 70 units that can be applied to their degree. They then took an average of 6.4 terms to complete 66.8 units (55 upper division and 12 lower division) and receive a degree. The average number of units at graduation was 139 (versus 134.9 for students who began their studies at SDSU and graduated during the same three-year period). There was a slight downward trend for the number of units and number of terms to complete over the three year period (140.6 with 6.5 terms; 138.8 with 6.3 terms; and 137.7 with 6.3 terms) that can be attributed to a recent CSU policy that requires a reduction to 120 units for graduation for a number of majors. We expect this trend to continue to a limited extent as students transition to the new catalog requirements with fewer units. The average number of terms to complete a degree (6.4) was fairly consistent across all disciplines because transfer students take fewer units than native students on average per semester. While the reason for this is not apparent from the data, interviews with students (reported later) suggest that work is, by necessity, the number-one priority for many students because of their financial situation.

In analyzing the data by college, it was clear in comparison to the average of 66.8 SDSU units taken by transfer students, College of Engineering and College of Health and Human Services students took more coursework (82.9 and 72.6 units, respectively) after transferring. Students in these disciplines also required more lower division units after arrival here (23.3 and 17.5) than the average of 12. The programs in these disciplines generally require a higher number of units and more preparatory work. In contrast, College of Business Administration majors took only 5.2 lower division units after arrival at SDSU, which is likely due to the impaction in the business area that requires completion of the core lower division courses before students are allowed to declare an upper division business major. Changes implemented for fall 2005 — which grant highest priority for admission to transfer students who meet the GPA for the major, have completed the lower division "preparation for the major" coursework, and all lower division General Education coursework — are expected to further reduce the number of lower division courses that need to be taken at SDSU.

      Retention and Graduation Rates for Local Transfer Students. Enrollment services has made a number of changes since fall 2000 aimed at improving retention and graduation rates of transfer students. For example, in spring 2003 a web portal was developed that allows students to receive registration dates and information, pay fees, view and/or print unofficial transcripts, obtain degree audits, and receive advising information on-line. A message center built into the portal provides all students with important and timely information. Given that little systematic examination of retention

and graduation rates for local transfer students has occurred, we wished to examine these data.

Examination of <u>one-year continuation rates</u> for local transfer students indicates a rather consistent overall rate of 85% from fall 2000 to fall 2003 while <u>two-year continuation rates</u> remained consistent but slightly lower at 78% [See <u>Table 5</u>]. When continuation rates are examined by ethnicity there is greater variability in retention success and the differential impact varies from year to year. For example, in the fall 2000 cohort African American students had lower one-year continuation rates (78.3%) than the average of 85% for all students while in the fall 2001 cohort the Filipino (72.8%) and Hispanic students (80.4%) had lower one-year continuation rates than the average of 85%. Similar variation occurs for two-year continuation rates, with African-American, Hispanic, and Filipino students having lower continuation rates than the average for all ethnicities. The most recent data (fall 2003 cohort) indicates that all ethnic groups except Filipino (77.9%) had one-year continuation rates of 83% or higher. These data indicate that while our one- and two-year continuation rates are quite high, we need to routinely examine these data disaggregated by ethnicity to enable us to put support programs in place where they will be most effective.

While the data in Table 5 suggest that we are quite effective in retaining transfer students, the <u>graduation rates</u> [See <u>Table 6</u>] give a very different picture. That is, while 2-, 3-, and 4-year rates have increased in the past couple of years they still require improvement. For example, graduation rates for the fall 2000 local transfer student cohort are 21.5% (2-year rate), 52.9% (3-year rate), and 67.2% (4-year rate). Examination of the fall 2000 cohort by ethnicity is even more telling. African-American, Hispanic, and Asian/Pacific Islander students have consistently lower graduation rates, ranging from 8% to 17% lower than the average 2-, 3-, and 4-year graduation rates for students overall. These data suggest that reporting two-, three-, and four-year continuation rates for transfer students disaggregated by ethnicity would provide us with a more accurate picture of whether students are leaving SDSU without graduating or are simply taking fewer units per semester due to other obligations. Our interviews with transfer students (reported in the next section) indicate that financial obligations are at least a partial explanation for these findings. However, better tracking of students would provide more definitive information.

<u>Transferring to San Diego State University: Student Perceptions</u>. A sample of local transfer students was interviewed to supplement the statistical data and provide insight into the choices and needs of transfer students. The interviews focused on their expectations of campus life, academic preparation, the effectiveness of SDSU student services, and other issues involving their transition.

A Coordinating Council subcommittee worked with the faculty member who teaches the qualitative research methods class, Sociology 408. This 40-person class was divided into teams of students who conducted 30-minute individual interviews in March/April 2005 with 80 transfer students. Initially, two random lists of transfer students from local community colleges were generated and provided to the instructor. One list contained names of students who completed their first transfer semester in fall 2004; the second list

contained those graduating in spring/summer 2005. Thus, the final 80 person sample represented two cohort groups: 42 new transfer students and 38 students who were completing their upper division programs. In late February the Director of Enrollment Services sent an e-letter to each of the students through their Web Portal account. The letter described the project and noted that they may be contacted to participate in this study. Overall, there was a high rate of interest by both the student interviewers and the students who were interviewed. Discussions with the students indicated that they wanted to play a role in making the transfer process better for other students.

The subcommittee generated an initial list of topics and questions of concern. After meetings with the instructor and receiving input from the class, a final Transfer Student Interview Guide was prepared to guide the interviewers. It contained questions about the students' background, the transition process, their preparation level, and their experiences with faculty, student services, and academic advisers. In addition to the specific areas outlined, students were asked about what other activities they engage in on a regular basis. Finally, they were asked to provide advice to other students and comment on how the transition could be improved.

The interviews were fully transcribed and coded using accepted qualitative research methodology. The report indicates that four major themes emerged from the data: (1) financial hardship; (2) academic counseling woes; (3) academic 'transfer shock;' and (4) lack of integration with the university.

Financial Hardship. Both new transfers and graduating seniors report serious financial concerns that dominate their lives. Many worked full or part-time while at community college and SDSU. In fact, the most frequently cited reason why students attended a community college was cost. Typical comments included: "It was cheap. I had to pay for it myself. My parents don't pay one single bit." and "It was so much less expensive." Financial aid is not a viable option for students whose parents won't complete financial aid forms or who can't/won't contribute the funds required by the financial aid assessment. Financial hardship reduces the ability of students to participate in campus activities, including the transfer student orientation: "I knew the importance of it, but honestly, I thought it was expensive. Just because I pay for my school and I pay for everything else, so I don't have $100 to say, Okay, let's go to orientation." Another student noted that "It just wasn't something that I was interested in paying for. I felt like it was stuff I could get out of the catalog or just being able to look up which classes match."

Academic Counseling Woes. Overall, students were happy with the SDSU application/transfer evaluation process, and there were few complaints regarding advisors at SDSU, although some reported minimal contact with them. Generally, students reported a high level of satisfaction in programs that allocated more resources to advising, such as in the Athletic Department. However, there were many complaints about inaccurate and misleading advising at community colleges that resulted in taking unnecessary courses. In general, students felt SDSU advisors should go to community colleges or advise students before they arrive at SDSU. The Department of Enrollment

Services has been adding information on the web over the past few years to improve access to course advising for incoming students and is continuing to do so.

Academic "Transfer Shock." The amount and nature of academic work at SDSU was a shock to students. Expectations of professors were higher than students had experienced. This caused problems in their first semester and students indicated that they had to learn new skills and adopt new strategies. As noted in the report, published academic research indicates that this experience is common to community college transfer students who must undergo an adjustment period.

Lack of Integration With the University. Students expressed difficulty with fitting in with the university. This problem stems partially from the size of the campus, but much dissatisfaction was expressed about class size. In addition to the impersonal nature of large classes, students found less flexibility in scheduling classes due to large class sizes which resulted in fewer offerings, and some expressed difficulty in learning in a large classroom environment. Another factor affecting the lack of integration was the minimal interaction students had with professors. Professors were perceived to be less approachable, less accessible, and less accommodating than community college professors. Also, overwhelmingly, transfer students did not participate in campus activities, organizations, and clubs. The main reason for this relates back to the financial hardship discussed earlier which requires a number of them to hold multiple jobs, but it is also influenced by the fact that a number of students are older, often with children and/or spouses, which limit the time and ability to become involved on campus.

Summary and Challenges

These case studies, which focus on two specific groups of students, demonstrate our commitment to educational effectiveness and help us consider strategies for improvement. Our studies of dual admit students and local transfer students illustrate how challenging it is to cope with access pressures while also positively affecting retention and graduation rates for these students and the larger student population. Yet it is critical that we continue to systematically analyze data and the detailed examination we have provided helps identify areas where we have limited control and those in which we can take clear steps to improve graduation rates for all students.

For example, it is evident from both the statistical data we examined and the interviews with transfer students that they are consciously choosing to take fewer units per semester due to financial obligations. This decision on their part obviously results in a longer time to graduation; thus, graduation rates reported for 2-, 3-, or 4-years will be decreased. This raises questions regarding whether graduation rate is the best indicator of student success. Perhaps a more important indicator is number of units to graduation, a factor over which we have some control. Number of units to graduation is a function of good advising at both the community college and SDSU. While we cannot fully control advising at community colleges, our data indicate that there are some changes we can effect. For example, we can implement more complete road maps for transfer students that specifically identify community college courses at each local campus with their counterparts at SDSU and make these available on the web. In fact, this project is already underway.

The use of continuation rates is similarly problematic as an indicator of program effectiveness, as described in the dual admit essay. Many students move back and forth among several institutions during their path to graduation. With improvements in technology that allow us to better track students, we will be in a stronger position to examine reasons for student fluidity. Again, personal reasons are not within our control, but if students are unable to take classes or are dissatisfied with student services we can make changes to improve their experience.

Both dual admit students and local transfer students feel a lack of connection with the university. Neither group of students participated in a large way in the student support services and opportunities available on campus. Research (e.g., Astin, 1993; Kuh, 2001; Pascarella & Terenzini, 1991)[2] indicates that student engagement is the single best predictor of student learning and personal development and may lead to improvements in retention and graduation rates. These findings suggest that we need to examine our policies and practices for strategies that result in greater student/campus connection.

Finally, these data reinforce the importance of examining continuation and graduation rates by ethnicity. Evidence presented for both dual admit and local transfer students indicate that our success with students differs by ethnicity. The systematic and routine examination of these indicators disaggregated by ethnicity is critical to ensure the success of all our students.

Our inquiry leads us to identify the following challenges in terms of students in these two groups:

❖ To examine and adjust, if needed, flexibility in class scheduling to accommodate students' work and family obligations;

❖ To seek additional scholarship and grant support for transfer students that would mitigate their financial obligations;

❖ To examine support programs, student services, and orientation, and make changes that align them with the needs of students.

Other challenges exist in relation to graduation rates and the broader student population:

❖ To reach agreement about the most meaningful indicators of student retention and graduation and then align university resources to address those indicators;

[2] Astin, A.W. (1993). What matters in college? Four critical years revisited. San Francisco: Jossey-Bass.
Kuh, G.D. (2001). Assessing what really matters to student learning: Inside the National Survey of Student Engagement. Change 33(3), 10-17.
Pascarella, E.T., & Terenzini, P.T. (1991). How college affects students: Findings and insights from twenty years of research. San Francisco, Jossey-Bass

❖ To develop a more robust infrastructure to support systematic examination of trends for all our students;

❖ To systematically report and examine continuation and graduation rates disaggregated by ethnicity and align programs and services that lead to increased equity in these, or other indicators of student success.

Featuring these two groups in our self-study has already created conversations about how we can address the challenges outlined above. Perhaps most significantly, the University Senate has reconfigured the retention council —an ad hoc group appointed by the Provost and Vice President of Student Affairs —charging it to focus on graduation as well as retention, and making it a permanent subcommittee of the Undergraduate Council.

Reflective Essay 2: Student Learning Outcomes Assessment: How Well Are We Doing?

Introduction

Student learning is at the heart of what we do as a university and it is critical that our students graduate with the knowledge, skills, and abilities they need to be successful citizens in our increasingly complex, global, and technological world. In order to determine our effectiveness, we conducted a systematic analysis of how well our departments and programs have implemented the student learning assessment process. This process includes specifying learning goals/objectives for each department or program, establishing direct measures of student learning, analyzing the results and using the data to inform program improvement.

This essay describes our examination of the effectiveness of our student learning outcomes assessment processes. The first part of the essay presents evidence about two ongoing campus-wide activities that were recently implemented: annual assessment reports and participation in the National Survey of Student Engagement (NSSE). The second part of the essay includes three case studies, each of which describes an assessment project designed to examine student learning by using direct measures of student work. The essay concludes with our immediate and long term challenges regarding our structures and processes for student learning assessment.

Annual Assessment Reports

During AY 2004-05 all departments/programs were asked to submit their first annual student learning assessment reports (regarding their major) to the Student Learning Outcomes Committee (SLO) on either October 15 or April 1. Departments responded to this request by completing a 4-question form in which they described their targeted learning goals and objectives for the previous year, the methodology used to examine student learning, a summary of the results and conclusions, and a description of the strategies for program improvement emanating from the results. These reports were reviewed by two members of the SLO Committee using a rating form developed by the committee. Individualized feedback letters were written to each department/program describing strategies for improving subsequent reports.

Fifty-four departments/programs submitted annual reports, which is an 84% campus-wide response rate. A review of the report indicates that approximately 30% of responding programs are using direct measures, 30% are using indirect measures (primarily surveys), 26% are using a combination of direct and indirect measures, and 13% are still in the planning stages of implementation. Further examination of the report indicates that departments had difficulty summarizing results and conclusions and linking that information back to program learning goals and objectives. In addition, only 26% of departments/programs "closed the loop" by describing strategies they had implemented to improve their programs based on what they had learned from their data. Women's Studies (see report and rubric), the Teacher Education program (see report) on the Imperial Valley Campus, Liberal Studies (see report) and Geological Sciences (see report) are four examples of departments that have implemented the entire student learning assessment process at the program level.

Two colleges, Business Administration and Education, elected to have all their programs report in the fall. Examination of the reports from the College of Business Administration indicates that there are two levels of student learning goals: college-wide goals and department/program specific goals. College-wide goals are being examined with direct measures of student learning and the reporting of results, conclusions and strategies for program improvement is fairly sophisticated. However, it is evident that there is much greater variation of understanding of the assessment process when reviewing the reports for program specific-learning goals. Some programs have implemented direct measures and are meeting in faculty groups to discuss the implications for program improvement while other programs are in earlier stages of implementation.

The College of Education has long made assessment of student performance a high priority. However, assessments of candidate performance in the form of individual paper records make the examination of learning outcomes at the program level a daunting task. To assist with this shift from examining student learning and competency at the candidate level to the program level, the College has adopted an electronic portfolio platform [TaskStream©]. Upon full implementation of this system, all departments in the College will be able to aggregate individual student performance data across their programs, thus moving the College to a sophisticated level of student learning outcomes assessment. Please see the College of Education Overview for more details regarding their strategies for developing and sustaining a college-wide program assessment plan.

Other colleges approached student learning assessment by choosing to have individual departments/programs work independently. Consequently, the participation rate in the other colleges was more varied, ranging from 62.5% to 100%. In addition to the College of Business Administration and College of Education, the College of Health and Human Services, which consists of primarily accredited programs where assessment is part of the accrediting requirements, also had a 100% response rate.

The Student Learning Outcomes Committee reviewed all reports and met near the end of the spring 2005 semester to discuss their overall reactions to the first reporting phase. Committee members' observations reiterated the summary findings, particularly in regard to the wide variety of understanding of the assessment process and the difficulty of "closing the loop" by the majority of programs. It was also evident that in most cases a single faculty member was responsible for not only writing the report but in many cases marshalling the entire assessment effort for their department/program. Thus, although we have made significant progress through the creation of structures and reporting mechanisms, we are in the nascent stages of a paradigm shift toward a culture of evidence. This is likely due to issues of faculty expertise and comfort at examining learning at a program level, time and resource constraints, and conflicting messages about what activities are deemed most important for faculty engagement.

National Survey of Student Engagement

San Diego State University participated in the National Survey of Student Engagement (NSSE) for the first time in spring 2004. The findings of *The College Student Report* indicated that we were similar to our doctoral-intensive peer institutions regarding most survey items. However, we observed significantly lower scores for several items, particularly for our senior cohort. In addition, our scores on the five benchmarks (Level of Academic Challenge, Active and Collaborative Learning, Student-Faculty Interaction, Enriching Educational Experiences, Supportive Campus Environment) place us in the bottom third of doctoral-intensive institutions, indicating that we have much room for improvement. The report has been shared widely on campus and initial discussions have centered on how we can use the results as part of a continuous improvement model for undergraduate education. The University Senate charged the Undergraduate Council with making recommendations about how we can improve student engagement prior to the next administration of NSSE in spring 2007. At its March 2005 meeting the Undergraduate Council recommended that an ad hoc committee be appointed by the Dean of the Division of Undergraduate Studies to examine the NSSE data, particularly the items in the *Level of Academic Challenge* benchmark, and make recommendations to the Council by November 2005. These steps will ensure that we track the effectiveness of any changes we implement in a systematic and evidenced-based manner.

Using NSSE for General Education Program Assessment. Question 11 of *The College Student Report* asks students, "To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?" This prompt is followed by 15 items that students respond to on a 1 [Very little] to 4 [Very much] scale. Several of the items (e.g., "writing clearly and effectively;" "speaking clearly and effectively;" "thinking critically and analytically;" "analyzing quantitative problems") are similar to the learning outcomes specified for our General Education (GE) program; thus, we decided to examine this group of 15 items to determine our effectiveness and ways we might improve. Table 7 displays descriptive and statistical findings of SDSU seniors in comparison to Doctoral Intensive senior peers. As indicated in the table, SDSU seniors had significantly lower mean responses than their peers on four items that are closely linked to GE outcomes: writing and speaking skills, critical thinking skills, and using computing and information technology. The percent of students answering "Quite a bit" or "Very much" ranged from 60% to 81% for these items. In addition, the standard deviations for these items were quite large, indicating a heterogeneous response by SDSU seniors. In fact, the 95% confidence intervals constructed around the mean responses span the entire 1 – 4 scale.

These results suggest courses of action that could lead to significant improvements. First, we need to specify standards that represent acceptable scores for these items so that we can measure our progress. Second, these baseline results could be used as a foundation to create a local assessment project for the GE program. For example, the GE committee might consider modifying the prompt to "To what extent has your experience in the GE program contributed to your knowledge, skills, and personal development in the following areas?" In that way, we can more directly link results with the GE program. Third, modifications to items to align them directly with SDSU's GE outcomes would also improve the validity of the results. And finally, this measure could

be implemented through the Web Portal and answered on-line by students in targeted GE courses to facilitate a feasible and sustainable indirect measure of learning in the GE program. Using this approach in conjunction with direct measures of student learning would reinforce the "best practices" principle of assessment by incorporating multiple measures of student learning.

Case Studies

The selection of these three case studies was purposeful. Two departments, Rhetoric and Writing Studies and Religious Studies, offer courses in the General Education (GE) program. We know that assessment of student learning in the GE program is in its infancy, particularly when compared to assessment efforts in the majors; thus, we selected two courses with very high student enrollments as pilot studies from which we could learn about the strengths and challenges of our processes. The other program, Liberal Studies, has been using student portfolios for the past 14 years and we wanted to document the strengths and challenges of this method of assessing student learning in a large program.

Liberal Studies Program. The Liberal Studies Program has been using portfolios since 1991, when the state of California required a summative assessment of students' ability to meet the revised subject matter requirements. The Coordinator and faculty in the program were determined to find a way to meet state requirements but also to understand what students were learning in their courses. What follows is a description of the changes that have taken place both in the portfolio process and in the program as a result of examining student work. This section culminates with a discussion of two recent projects in Liberal Studies, an examination of student learning in LS 300 and in the capstone essay.

Program Changes Since the Last WASC Visit. The last WASC visit took place in 1997. At that time, students gathered assignments from all subject matter areas: (1) language arts; (2) math; (3) science; (4) physical education; (5) history; (6) arts and humanity; and (7) human growth and development. Scoring rubrics were developed for each area and student work was read by faculty members within the subject matter area. After the readings, full-time faculty members, lecturers, and the Liberal Studies Committee came together and discussed their findings. These discussions resulted in several curricular changes to address identified shortcomings. For example, the History Department created two new courses when the faculty found that students had a weak understanding of both United States and world history. Also, the Exercise and Nutritional Sciences Department ensured that all sections of the physical education course dedicated to liberal studies students required the development of a lesson plan.

The language arts faculty felt little curricular reform was needed but in 2003 met with the Liberal Studies 300 faculty to discuss writing quality, especially punctuation and grammar. Writing quality is one of four major assessment initiatives for the next two years. It is now being assessed as a separate score in the portfolio papers. The math faculty were unhappy with students' abilities to explain mathematics solutions conceptually. This problem has been resolved in part by hiring a core of lecturers dedicated to teaching the required upper-division math classes. The faculty is now

seeing consistent samples of student work across all sections. The science-area faculty discovered that modeling the scientific method did not result in adequate student learning; this problem has subsequently been resolved by including explicit attention to the nature of science and, to a lesser extent, to the history of science.

The Liberal Studies Coordinator routinely examines portfolio passing rates. In 1998, it was discovered that Hispanic students were failing the portfolio requirement at higher rates than other racial and ethnic groups. The Coordinator also found that Hispanic students were attending the portfolio workshops or Liberal Studies 498, an optional course that prepared them for portfolio development, at lower rates than other students. Consequently LS 498 became a required course, which increased the pass rate of Hispanic students to a level comparable with other racial and ethnic groups.

The student work examined in the portfolios provided the foundation for the curricular and programmatic changes described in the previous paragraphs. However, the Coordinator and faculty believed that a missing component of the portfolio was the opportunity for students to demonstrate that they could view their program as an integrated whole and relate these areas to elementary school teaching. This led to the inclusion of a capstone essay in 1998. Students are asked to compare the objectives, methods, and standards for evaluation of two teaching subject disciplines. In addition, students discuss the implications of these materials for the elementary classroom teacher.

Liberal Studies 300 Student Learning Project. Liberal Studies 300 is an important gateway course taken early in the junior year to provide an introduction to the major and the nature of the disciplines. In 2002, this course underwent a major revision as faculty members teaching this course discussed its learning objectives to ensure consistency across the 7-8 sections taught each semester. During fall 2003, spring 2004, and fall 2004, an assessment of student learning was conducted to determine the extent to which students were meeting the objectives. Two specific learning objectives were examined: (1) *Describe the basic goals, processes, and evaluation methods of each academic discipline taught in K – 12;* and (2) *Write clearly about a given topic, using specific examples to support the main ideas(s).* The following paragraph describes the results of the fall 2004 analysis.

Students in all sections of LS 300 [N =213] were asked to respond to a specific question aligned with objectives "1" and "2." A scoring rubric was used to rate students on three dimensions: (1) articulation of a clear statement of goals, processes and evaluation methods; (2) ability to develop the main ideas with clear writing and organization; and (3) use of specific examples. Results [See Table 8] indicated that significant variation in student achievement of these learning objectives exists across sections. In addition, students' ability to develop main ideas with effective writing and organization (56% of students achieved at least acceptable levels) and their ability to support their arguments with specific examples from other courses (49% of students achieved at least acceptable levels) was less than desired. Similar findings occurred in the fall 2003 and spring 2004 semesters. The program Coordinator and a lead faculty member have worked with the LS 300 faculty to use the new course materials more effectively. Additional materials

have been added to the course packet and those that were less effective have been eliminated or reduced in length. In spring 2005 students who have completed the fall 2003 and later sections of Liberal Studies 300 are now taking Liberal Studies 498 and will soon be submitting portfolios, which will allow us to examine whether the changes made in LS 300 increase the level of student learning evidenced in the final capstone essay.

Capstone Essay Student Learning Project. The final capstone essay builds upon what students have been learning in their Liberal Studies courses as well as what they learned in Liberal Studies 300. The capstone essay is aligned with two program goals that require students to compare two teaching subjects. Students are expected to discuss the objectives, processes, and standards of evaluation in the two subject areas, using appropriate supporting examples. In addition, students discuss the implications of their analysis to teaching. Finally, students' writing ability is also assessed. A detailed rubric is used to evaluate student learning in this 10-page assignment.

In fall 2004 the literature and history faculty undertook an examination of student learning in the capstone essay with the specific goal of looking at alignment with what is taught in the upper division children's literature, United States history, and world history courses. Results [See Table 9] of the examination of 14 essays indicated that students were most successful in discussing implications for teaching (79% achieved minimum standard), while all other areas, including writing ability ranged from 57% to 64% of students achieving the minimum standard. While these data indicate an improvement from the level of competence demonstrated in LS 300, a greater percentage of students should be achieving the minimum standard of student learning at this level in the program.

As a consequence of these findings, faculty discussions have focused on the nature of the prompt (how restrictive versus open-ended), the magnitude of the capstone assignment (perhaps a focus on goals or processes or evaluation, not all three, would be more appropriate), and the alignment of the expectations of the capstone essay with what is taught in the courses. The children's literature faculty has met with Liberal Studies program leaders and created outcomes for children's literature and for writing. They suggested ideas for capstone essay prompts that would focus more closely on what they teach; they consider literature to be the interpretation of existing pieces of literature, not how those pieces are created. Program leaders will follow up with the history faculty in spring 2005. They will focus on the visual and performing arts next, because California Subject Examination for Teachers (CSET) subtest scores as well as portfolio essays suggest a need for more historical and aesthetic content in the courses. Meetings with math and science faculty will take place in fall 2005 as these subject areas seem to be the best aligned with expectations.

Program leaders are considering not only what type of content should be included, but also how to better structure the final assessment process. When the CSET became a requirement for entry into a credential program in California in August 2003, the program Coordinator had one week to simplify the portfolio requirements. With the implementation of the new, 135-unit streamlined Liberal Studies and credential

"Integrated Program" occurring soon, she and her leadership team are now considering a more streamlined summative assessment program. The new program will continue to assess writing and research ability — two outcomes not assessed by the CSET — as well as commonalities and differences between disciplines.

Rhetoric and Writing Studies. In spring 2004, Anne Fadiman's *The Spirit Catches You and You Fall Down* was selected as SDSU's first book for the Summer Reading Program, a project designed to engage first-time freshmen in a common learning experience. Following the selection of the book, the Department of Rhetoric and Writing Studies (DRWS) encouraged instructors to use the book in RWS 100 (The Rhetoric of Written Arguments, the first-semester General Education writing course) in fall 2004.

DRWS's Lower Division Writing Committee (LDWC) designed a sequence of writing assignments that incorporated the Fadiman text. The sequence was intended for new Teaching Associates, who use a common syllabus in their first semester of teaching, and by any other instructors who wished to use it. In August 2004, during the department's annual conference on pedagogy, a faculty panel conducted a workshop on the one assignment that specifically addressed the Fadiman text and rhetorical approaches to teaching Fadiman. The workshop was attended by over 50 instructors.

Twenty-six DRWS 100 instructors taught the Fadiman text in their classes, with approximately 20 using the model assignment or a slight variation on it. Those 20 instructors were invited to submit student papers in response to that assignment for an assessment project examining how well students were meeting the DRWS learning outcome concerning diversity. They were also invited to participate in a reading of those papers on December 4, 2004. Instructors submitted clean, ungraded copies of their student papers to the department. Staff randomly selected five papers from each class and copied them for the December 4 reading.

A rubric was designed for scoring the papers, modeled on one described in Dallinger and Mann's (2000) "Assessing Student Knowledge of and Attitudes toward the Humanities" (*College Teaching* 48.3, pages 95-101). It also repeated language from the departmental learning outcome about diversity and from the assignment itself, laying out three scores, Strong, Moderate, and Low.

Fifteen instructors attended the scoring session, which began with a norming session of approximately 45 minutes. The scoring process for this project was different from other holistic scoring events that instructors may have been familiar with, since it focused specifically on one learning outcome. The diversity outcome is fairly new to DRWS, having been added to the list of outcomes in 2003.

Each paper was read by two readers and ranked Strong, Moderate, or Low. In cases where the scores diverged, the papers were read by a third reader. The group read 80 papers, in addition to the 8 norming papers. Twenty seven papers (31%) were rated Strong; 42 papers (48%) were rated Moderate; and 19 papers (22%) were rated Low.

Following the scoring, but before anyone had seen total scores tabulated, instructors discussed the project and papers. Several themes emerged from that discussion. For example, instructors were impressed with the thoughtfulness of the papers and the depth of students' analyses. They felt that the prompt allowed students to write about how authors use language to engage readers in thinking about difference. The following quotes exemplify instructors' reactions to students' writing:

> "I'm struck...by the quite thoughtful way in which students engaged the topic. I was actually surprised at how well they were able to articulate what was going on in the texts. As RWS 100 students, it was at times perfunctory, their analysis, but showed that they had thoughtfully engaged with these texts. You don't always see that..."

> "What struck me with the strong papers, was the fact that the prompt asks students to look at strategies that the author used and that permitted them to connect and express their compassion and maybe grow up a little bit and mature in their own thinking in articulating those strategies..."

> "As they were working through the texts, they became aware of their own assumptions. It's hard for them to become aware of that and move into an expression of it. But being able to verbalize how these writers do that, it gave them an opening...to express that we do deal with other cultures with our own assumptions and our own bias, and this was eye opening."

Instructors appreciated seeing papers from across various classes and were encouraged that these papers seem to represent a program, that there was consistency in various teachers' approaches to rhetoric. This theme is best exemplified by the following quote:

> "....One of the other strong things...it seemed like these papers were written by students who could have all been in the same class. I was encouraged by the fact that they all seemed to be on the same page with rhetorical strategies, and yet these came from classes where there are different instructors, and even the material was different."

Instructors also recognized the complexities of teaching about diversity; some said they felt underprepared for that task and wanted discussion of this contested term and ways to approach it. At the same time, instructors agreed that, in this department, diversity is approached through the discipline, which is concerned with language; how people write about diversity, speak about it, communicate with others about it.

> "We remain a department interested in language, right, so it seems to me that no matter what we come at from diversity, it's going to be a matter of how people write about it, speak about it, communicate about it...what I like about this project is that it allowed (students) to talk about the communication and ways of speaking to one another becomes a way to talk about tolerance; because a lot of the papers came to the conclusion that respecting one another's culture and speaking to one another in a way that shows respect for one another's cultures is the way to

prevent things like Lia Lee from happening…."

"if you go toward what you're saying, and picking out very specific ways that an author is asking us to look at another culture and tolerate them…that's a big cognitive step for students….and the success of the papers, the prompt, is that a lot of students are able to do that."

In summary, the instructors and the program director were generally pleased with the level of student learning for this outcome: almost one-third of the papers were rated Strong while another 48% were rated Moderate. In addition, this project was a launching point for a program-wide discussion about how student work is read and the kind of intellectual work the department wishes to emphasize. It was clearly very useful to discuss work across sections and to self-assess the consistency across a multi-section program. The ways of reading and scoring papers for this project were different from approaches used for other assignments, prompting the Lower Division Director to plan sessions in which instructors will discuss and compare the merits of various rubrics that have been used in the department. Finally, this assessment of student learning inaugurated a useful conversation about how the discipline of rhetoric can approach and teach diversity in RWS classes.

Religious Studies. The mission of the Department of Religious Studies is to facilitate informed and constructive dialogue in a religiously plural world. Program goals are to help students become more globally aware and culturally literate, able to appreciate a plurality of worldviews, including their own, and become engaged citizens in democracy. Prior to fall 2004, no systematic assessment of student learning had been conducted at the program level; thus the department decided to begin this process by examining student learning across multiple sections of a General Education Foundations course, World Religions, RS 101.

In fall 2004 there were 16 sections of World Religions with a population of approximately 1,075 students. Three professors used a common writing assignment in nine sections. This assignment was specifically aligned with learning outcomes 1.1, 2.1, and 3.1 and was part of the students' course grade. The use of an embedded assignment ensured that the assessment project was integrated into course expectations, increasing the validity of student responses.

Fifty student essays were randomly selected from the nine sections for an examination of the extent of student learning. A 4-point rubric was developed and three faculty members held a norming session to become familiar with the rubric and resolve any discrepancies in its use. After the norming session the faculty members independently read and scored the 50 essays.

Results indicated that 26% of the papers were rated at the 4 level, 22% at the 3 level, 34% at the 2 level, and 18% at the 1 level. Department faculty deemed a "2" a minimum level of achievement. Thus, for this random sample, 48% of students achieved a "3" or "4" and 82% achieved the minimum standard or higher.

Faculty members were impressed with students' writing ability and their respect for religious pluralism. For the most part, students seemed to find value in all the world's religions and seemed grateful for the opportunity to discuss the issues that worry them—from factory farming and global warming to the war in Iraq and current controversies regarding the separation of Church and State in the United States. Even students who expressed negative feelings about religious institutions and authorities appeared to leave the class understanding that religious experience and religious practice, which they often described with the term "spiritual," are part of what makes life worth living.

In summary, faculty members were quite pleased with the level of learning exemplified in the student essays. However, they also uncovered several problems through this assessment. First, the division of department learning goals into knowledge, values, and skill-based outcomes did not mesh with the assignment nor would these distinctions work well for other assignments. That is, students had to "know" the world's religions, they had to recognize social and human "values," and they needed the critical thinking and writing "skills" to put the essay together. A departmental discussion about the student learning outcomes will be held to discuss the learning goals and objectives and decide if any modifications should be made. Second, it became apparent that student learning could be enhanced by ensuring that all Religious Studies faculty, including part-time lecturers, are aware of department learning goals and objectives. The department chair, who participated in the project described in this report, has decided that all faculty members will need to re-examine and update course syllabi to ensure that the department learning goals and objectives aligned with each course are listed on syllabi. In addition, faculty members will need to address student learning in periodic evaluations of their teaching effectiveness. And finally, the faculty who participated in this project saw the importance of using scoring rubrics for student work. Not only could they see that rubrics would save time in evaluating student work but they were also convinced that sharing rubrics with students prior to assignments could enhance student learning. Students would have a very clear idea about the expectations for their work, allowing them to focus their efforts toward meeting those expectations.

Summary and Challenges
While we have made significant progress in examining student learning in the major, particularly with the implementation of annual progress reports, it is evident that we have a long way to go before we can state with confidence that we have become a learning-centered university. Data from the fall and spring assessment reports indicate that while almost all departments have specified learning goals and objectives for their majors, many departments lack the expertise or time to design assessment projects that align direct and indirect measures with their objectives. In addition, examining the data and reflecting on their implications for change at the program level is in a very early stage of implementation. The departments that have been most successful in implementing the continuous improvement model either have outside accrediting bodies that also require student learning assessment or have a small number of majors and a strong faculty leader who is familiar and comfortable with the notion of program

student learning assessment. These factors go a long way toward mitigating a number of challenges that other departments face.

The case studies also provide us with rich information. Liberal Studies has been using portfolios for its students since 1991 and has significant experience with examining student learning. Yet, it too struggles to bring its faculty together to discuss student learning at the program level, rather than the individual student level. Rhetoric and Writing Studies and Religious Studies have department chairs who not only support the assessment of student learning, but are members of the WASC Coordinating Council. This created an opportunity for them to engage in multiple committee discussions about student learning and to receive support from the Associate Dean of the Division of Undergraduate Studies for project organization and completion. Thus, our self-study provides us not only with a measure of the effectiveness of our student learning outcome assessment processes, it also provides guidance for the changes we need to make.

Our reflection on the evidence we gathered for this essay leads us to identify the following challenges:

- ❖ To create a more robust infrastructure that supports coordinated and systematic efforts of examining student learning at the college and university level;

- ❖ To develop a more robust infrastructure that supports the data collection, analysis, and reflection necessary for evidence-based program improvement;

- ❖ To create opportunities for faculty members to share their experiences and practices in student learning assessment;

- ❖ To provide sufficient faculty development support to achieve the paradigm shift that program assessment of student learning represents for most faculty members;

- ❖ To discuss and explore strategies for developing an incentive/reward system for faculty members that communicates the value and importance of engaging in student learning assessment;

- ❖ To develop a systematic plan for examining student learning in the General Education program.

Reflective Essay 3: The Impact of Participation in Research, Scholarship, and Creative Activity on Undergraduate Student Learning

San Diego State University's emphasis on research and creative activity has been a part of its culture for over 30 years and was developed in conjunction with its dedication to teaching. Research indicates that life-long learning is enhanced by interactions with faculty members inside and outside the classroom. These interactions provide students with opportunities to learn how to think and work together to solve problems. Moreover, undergraduate student involvement in these activities exemplifies institutional practices that can lead to increased student engagement, the single best predictor of student learning and personal development.

While the Capacity and Preparatory Review described the variety of ways students can become involved with faculty mentors, the Educational Effectiveness phase of reaccreditation provided a vehicle to engage the university community in developing and conducting a systematic evaluation of research, scholarship, and creative activity (RSCA) at SDSU. The goal of our investigation was to develop an understanding of the extent of undergraduate student involvement in RSCA, to examine its contribution to student learning, and to identify ways in which RSCA could further enhance the undergraduate education experience. A variety of methods was used to examine RSCA including surveys, interviews, focus groups, and an examination of student work. The triangulation of faculty and student perceptions with direct measures of student work provided us with a rich understanding of RSCA and its impact on student learning.

This essay describes our findings from the variety of sources we examined, the implications of these findings, and the immediate and long term challenges we face in improving the effectiveness of RSCA participation on student learning. The process of examining RSCA began with a review of the student learning assessment plans of all departments to identify where undergraduate RSCA was viewed as very important. Undergraduate RSCA experiences and activities in the following three departments were selected to serve as examples of current practices: (1) Exercise Physiology; (2) Theatre; and (3) Biology. After reviewing these examples of RSCA, we developed a department chairs' survey that would provide us with a more complete picture of the kinds and extent of opportunities that exist for undergraduate students across the entire campus.

Survey of Department Chairs and Directors
In August 2004, all department chairs and school directors across campus were asked to participate in a survey that sought to gather general information on the level and variety of undergraduate RSCA that was taking place and to identify academic units that placed a high priority on these activities. The survey asked chairs to list their advanced RSCA courses, estimate the percent of their undergraduate majors who were required or voluntarily chose to complete a RSCA course, and to rate the value of offering RSCA in allowing undergraduate students to acquire the skills needed to succeed in graduate school or in a professional position. Chairs were also asked to report on the frequency of their undergraduates engaging in work leading to publications and conference presentations.

Fifty-five chairs and directors from departments representing 88% [fall 2004 semester] of the university's upper division FTE reported on their undergraduate students' RSCA activity. Seventy-one percent of those responding offer a RSCA experience for their students, while 46% of those offering a RSCA experience require this experience of all majors. In fact, enrollments in all 300- and 400-level courses chairs identified as having an RSCA component averaged 2,573 students over the fall 2002 – fall 2004 period (excluding summer terms). Enrollments in 500-level RSCA courses, which may include both undergraduate and graduate students, averaged 799 students over the same time period. This finding was supported by responses to another survey question. Using a scale from 1 to 7, chairs and directors were asked to rate the importance of RSCA in achieving the skills necessary for success in graduate school or a profession. Seventy-seven percent of respondents rated RSCA activities with a score of 5 or higher, with 44% rating the importance of RSCA activities at the 7 level.

The survey showed that undergraduate students in some programs have opportunities to pursue work that results in a publication, conference presentation, externally critiqued performance or juried exhibition of works. Generally, this involves joint work with faculty members or work under their supervision. Nineteen department chairs reported that at least one student authored or co-authored an article with a faculty mentor that was published (or in press) in a refereed journal or book during the 2002/03 and 2003/04 academic years. The most active departments were biology, chemistry and biochemistry, and psychology, where 16 to 30 undergraduates authored or co-authored a refereed article.

Participation in professional conferences is more common than the authoring of refereed articles. Thirty-three chairs reported that undergraduates presented or co-presented research findings or scholarly work at a professional conference including over 30 undergraduates with majors in the psychology department and 16 to 30 undergraduates with majors in the biology and the chemistry and biochemistry departments. Some of the research associated with these presentations is published in refereed conference proceedings. Thirteen departments reported that at least one undergraduate student authored or coauthored an article with faculty that was published (or is in press) in a refereed conference proceedings during the 2002/03 or 2003/04 academic years.

RSCA activity also includes externally critiqued performances and juried exhibitions of works. The departments of art design and art history, music and dance, and hospitality and tourism management report that over 30 of their majors engaged in this activity during the 2002/03 and 2003/04 academic years.

Finally, undergraduates authored non-refereed articles and participated in student competitions and conferences. Twenty-one departments reported that at least one student authored or co-authored a non-refereed publication with a faculty member. The mechanical engineering department reported over 30 of their majors did so during the 2002/03 and 2003/04 academic years. Thirty-two departments had at least one undergraduate student participate in a student competition or conference. This includes the departments of art design and art history, hospitality and tourism management, music and dance, and psychology where over 30 students participated in this activity.

The departments of biology, mechanical engineering, theatre, television and film, and marketing reported the involvement of 16 to 30 of their students.

These findings indicate that undergraduate students are engaged in RSCA activities to a great extent and that involvement in RSCA is highly valued by the faculty. Complete survey results are located in the linked report.

Department Chair Interviews and Faculty Focus Groups
Based on the survey results, nine academic departments that identified undergraduate RSCA as important and included RSCA in their undergraduate experiences were chosen for further investigation. Structured one-on-one interviews were conducted with the heads of these departments. Using recommendations provide by the chairs, 12 faculty members who had engaged undergraduate students in research were invited to participate in one of three focus groups. The interviews of department heads and the faculty focus groups were conducted during fall 2004 by a faculty member with extensive experience in qualitative research techniques. They were aimed at developing an understanding of: (1) how faculty members define undergraduate RSCA; (2) the opportunities that exist for undergraduate students to engage in RSCA within the department; (3) the learning outcomes that are believed to be gained through participating in RSCA; and (4) the level of integration of RSCA into undergraduate student course work. After reviewing the transcripts and coding the data, the following themes emerged: definition of RSCA, types of undergraduate RSCA, benefits associated with RSCA, community of scholars; and barriers to student engagement in RSCA. Please see the linked report.

Definition of RSCA. Though RSCA is clearly described in SDSU's retention, tenure, and promotion documents, our investigation discovered that there is a diversity of opinion as to what constitutes undergraduate research, scholarship and creative activity at SDSU. Certainly there are examples of honor theses, semi-independent laboratory and library research as well as creative endeavors that fit the traditional RSCA definition expected of graduate students. However, undergraduate RSCA appears to be more diverse.

RSCA experiences for undergraduate and graduate students were described as both qualitatively and quantitatively different. Undergraduates participate in fewer activities, for a shorter time, at less depth, and less systematically than graduate students. Undergraduate RSCA is often less structured or associated with a class assignment, rather than being part of a research class or long-term independent project. It is usually less sophisticated than graduate RSCA. The qualitative differences were also evidenced in comments about the higher level of involvement and the more fully developed, advanced skills required of graduate students. Undergraduates were more likely to be learning and performing the basic work associated with conducting RSCA by assisting graduate students or faculty in their endeavors.

Types of Undergraduate RSCA. Undergraduate RSCA experiences and products differ by discipline and within disciplines. Discussions with the faculty indicated that

experiences often could be classified as research projects, internships and creative endeavors. Products include papers, presentations, publications, shows and exhibits. ·

Research Projects. While some undergraduates are involved in basic research, many pursue applied research that seeks to solve specific problems. Examples cited by respondents demonstrated that interesting projects with high quality learning experiences fall under the applied research category. Outcomes of basic and applied research efforts include papers, presentations and publications. Some departments offer undergraduate theses as an option or a requirement. In addition to professional publications and meetings, there are numerous in-house venues for communicating undergraduate research (poster sessions and departmental presentations), although no campus-wide undergraduate research forum exists. There is also the CSU-wide annual student research competition and the CSU Program for Education and Research in Biotechnology meeting.

Internships. A number of disciplines defined practical training for the professional realm as the best type of RSCA. As a result of the orientation toward "real-world" experiences, such RSCA often takes the form of an internship or project in the work environment, and typically culminates with a written or oral report. This serves employment goals and furthers the ability of the student to perform RSCA in the non-academic setting.

Creative Endeavors. These activities can be exemplified by the work done by an actor in creating the stage persona of his/her character or the effort carried out by designers in determining appropriate scenery and costumes for a play. Other creative activities involve production of unique products for performance or exhibit.

Benefits Associated with RSCA. Only a small number of programs reported that undergraduates engaged in RSCA with the expectation that their efforts would lead to a publication in scholarly journals. In response to questions asked during the focus groups, faculty members generally described undergraduate RSCA using terms such as "hands on research," "applied research," "learn by example," "evidence-based practice," "applying what they learned in class," and "seeing the process of knowledge being created."

For example, a faculty member participating in a focus group described the outcome of a student's introduction to research in this way:

> *"Several years ago, a student that I worked with, I thought, really hit the nail on the head, articulated very well how research helped them by saying it was the first time they were aware of [it] in their education of someone asking a question, but didn't know the answer. They're so used to being asked a question, and they're supposed to demonstrate that they can get the answer that I got, and that I already know. And they found it very upsetting for a little while to think that they could come to me and say, 'Well, what do you think about this?', and I'd say, 'I don't know, let's think about it'. And yet they found that to be very valuable so over the summer they felt that they really came up with something. I think that a thoughtful student recognizes an enormous amount of benefit in*

participating in that way, because we all know that, come graduation day, they're going to get thrown into zillions of questions to which no one has the answers. I think that's the essence of an intellectual culture, to show students how to frame appropriate questions. And they've got to come up with their own answers as best they can with limited resources."

Evidence-based practice was exemplified by the following quote:

"For nursing, we try to prepare the students to engage in what we call evidence-based practice. In other words, what they're doing in caring for patients should be linked back to research that has provided some rationale, some substance for why we're doing care in a particular way."

The exposure to literature may also emphasize the evolutionary nature of evidence-based practice.

"… we're trying to impress on the students that you cannot just keep doing like you've always been doing it because in fact there may be better ways to do it and so we're sending them to the literature to look at research studies that have been done relative to the care of let's say a certain group of patients who may be diabetic or maybe they have heart disease, anything you can name we want them to look to see what the best standard of practice is and that comes out of our research programs."

Throughout all the interviews, participants described various ways that RSCA is linked with some form of collaboration, which was often presented as the single most important opportunity for intellectual growth. Many faculty members provided specific details of benefits to students based on collaborative RSCA opportunities. Some students who work with faculty mentors are able to use undergraduate conferences to practice their presentation skills and then some go on to present papers at national conferences. Research-active faculty members report that students benefit from classroom lectures that are improved due to faculty research. When faculty members discuss their research findings in class, students get excited about the possibilities in that field and as a result have changed their major or decided to return for graduate study in that area. The faculty thinks that students benefit by receiving career advice and other types of mentoring as a function of their RSCA collaboration. In some departments, faculty who engage in field research are opening projects up to student assistants giving them the opportunity to see firsthand the practical applications of their field of study.

Community of Scholars. The concept of a 'Community of Scholars' was referred to by all interviewed faculty members, directly or indirectly, as a model of academic life. It was this model that connected the parts of each interview and formed a linking concept for faculty members from different disciplines to communicate. Faculty members who participated in the focus groups were enthusiastic about the benefits of collaboration in research, scholarship and creative activity between the faculty and students. While the faculty was specifically asked about their collaboration with undergraduate students it emerged through their answers that research with graduate students and undergraduate students cannot be separated into distinct issues. *"It's a*

complete... It should be a complete package. There has to be a community of committed scholars attending to undergraduate and graduate learning and attending to faculty and student research both... There were both graduate and undergraduate students involved because that type of work is good for integration of all levels of the education process."

While in some departments, collaborative RSCA experiences are in effect saved for graduate students or are dominated by graduate student participation there are other departments where the increase in the participation of undergraduate students in RSCA activities is quite purposeful. Several interviewees mentioned that the expectation of new faculty hires is to include undergraduates in their ongoing RSCA activities. When undergraduates are included in RSCA activities, faculty member respondents mentioned that it is wide spread, *"at least 80%, the way it has developed in our department most faculty are doing this and it just happens."*

Not all faculty members viewed the 'Community of Scholars' in a positive vein. There is a perspective among some that the nurturing of the physical community at SDSU is lacking and that because of inhospitable office space and lack of necessary equipment and supplies, most of the real work of research takes place off campus. For example, *"You have to get off campus to get your creative work done. You would think that this is the place to do creative work. This should be a haven, a community of creative and scholarly work."* It is also possible that the sense of a limited physical community is inhibiting the ability of some SDSU faculty members to create a sense of intellectual community as evidenced by comments such as *"there really isn't the kind of support that's needed to have an actual bona fide intellectual community,"* and *"there isn't the intellectual community here that you'd expect at a large research-oriented university."*

Resources and Other Barriers. SDSU is unlikely to ever be a resource-rich institution, so we must periodically appraise how our resources might best be allocated to derive the greatest benefits. For the purposes of this section of our essay, this includes an understanding of the scope and level of resources required to create active-learning opportunities for students, along with consideration of how the necessary resources might be funded. Currently, many academic units on campus are using internal resources and external funds to create opportunities for their students to engage in activity-based learning. These include faculty resources, but also equipment expenditures and direct support to students.

As might be expected, constraints imposed by limited resources emerged as a key topic in many of the chair and faculty focus group interviews. Faculty see their ability to live up to the expectations of the university, their discipline, and their own profession as a teacher-scholar as being seriously curtailed in terms of fiscal resources, campus support, and time availability. In addition, most participants are mindful that, with the ever-increasing enrollments, faculty time is becoming stretched, and that creative ways of reaching multiple students are needed as is the need for finding ways to provide incentives for involving students in RSCA projects. Undoubtedly, the primary cost to providing RSCA to undergraduate students is faculty time. Oversight of special studies courses (e.g., 498, 499 courses) generally fall outside the teaching-load assignment and thus, the faculty receives no compensation from the for their services with these

courses. Many faculty members supervise special studies because they have an interest in the topic, it is related to their own research, or they recognize the value of the experience to a student. While in some disciplines indirect compensation may lead to a publication or conference presentation, it is not the norm.

The time and energy required to direct students in activity-based assignments such as a research project, internship, or community-based project is greater than that required for a large lecture-format course. Additional time demands that may result from working with undergraduate students on RSCA projects include scheduling consultation meetings with students, organizing projects with community entities and obtaining feedback on student performance, and assisting students to prepare for external presentations. In addition, there are opportunity costs associated with offering numerous upper-division courses employing activity-based learning. These courses typically have lower enrollments; thus departmental FTES targets must be reached using large sections elsewhere, offering multiple sections, or by hiring additional part-time instructors. Accordingly, the SDSU Curriculum Guide reflects the expectation that enrollments will be lower in activity-based classes relative to classes taught in a lecture format. Alternately, enrollment in these activity-based courses could exceed the normal levels. In this case the burden of a high enrollment falls on the instructors who may consequently spend less time on other classes, their own research, or service activities.

RSCA may also require physical resources as well as faculty time. In the physical and social sciences, laboratory equipment and supplies are required. Undergraduate scholarship depends upon excellent library resources. Performances in the fine arts require performing spaces and budgets that support the costumes, lighting, and supplies necessary to underwrite productions in art, theatre, film, music, and dance. External funds, including funds provided by grants, are necessary to support research activities in the physical and social sciences and health services. Supporting student travel or offering stipends is a challenge in other areas. The College of Sciences does have various programs in place to support undergraduate research by underrepresented groups that are administered by the Office of Student Research and Support Programs. These federally-funded programs include the SDSU McNair Scholars program, Minority Access to Research Careers (MARC), Minority Biomedical Research Support Program (MBRS), and Minority International Research Training. However, this support is not evident in most other colleges.

Another barrier to getting students involved in collaborative RSCA experiences on campus is the sense of unclear ethical boundaries and issues of ownership. The faculty has observed a lack of willingness on the part of some student collaborators to take ownership of the project and be willing to expend their resources to complete the project. Some faculty members feel that they are taking advantage of students by using them for activities that are not clearly educational but that need to get done in the process of a RSCA project. An additional barrier that was identified is the fact that most students are working outside of class and do not have the time or the inclination to work on a faculty driven project or with a group of students. On the other hand when faculty members encourage students to come up with their own projects instead of working on the mentor's project, it is often the students who take the easy way out and choose to

work on the mentor's project — which may inadvertently reinforce the engagement of the less enthusiastic student in research projects as opposed to the most highly qualified.

Student Focus Groups

Student focus groups were conducted as a way to triangulate student perceptions of RSCA with faculty perceptions about these activities. However, due to time constraints only two focus groups, each consisting of three students, were conducted. These students represented the following departments: Biology, History, Psychology, Anthropology, Political Science, and Art. While we realize that no far reaching conclusions can be drawn from such a small sample of students, we did want to report the perceptions of these students, particularly since they independently arrived at several themes, some of which dovetail with those reported by the faculty.

Almost every student participant expressed the idea that some kind of research methods class should happen early in their SDSU experience. The students from Biology and Psychology stated that it was the opportunity, early on, to engage in RSCA that really piqued their interest in their majors. The other students felt that students in "The Sciences" have a distinct advantage in terms of early engagement in the practical aspects of disciplinary-specific modes of inquiry and all students expressed an interest in this experience. Four of the six students independently cited situations in which they felt their RSCA was curtailed because of lack of basic resources. The resources they named included lab (studio, workspace) facilities, faculty member availability, and equipment, materials, or supplies. To mitigate some of these challenges, several of the students suggested that community-based service learning might provide some answers to the problem of lack of resources because the community becomes the "lab" that may not exist on campus. Students also saw this as an opportunity to apply their growing command of their discipline to real world situations. Finally, students in both focus groups suggested that SDSU should promote and celebrate student engagement in RSCA by sponsoring "fairs," competitions, publications, and colloquia. They also mentioned the lack of "coverage" in campus media (*Daily Aztec* and *SDSUniverse*) of students' academic accomplishments. Students saw these strategies as ways to connect students to the faculty, the university, other students, and the community.

Direct Measures of Student Learning

This section describes a series of case studies that exemplify our efforts in examining student learning during an undergraduate RSCA experience. The first case, the College of Sciences Research Symposium, has been in existence for eight years. The remaining cases come from departments/programs that indicated that undergraduate student participation in RSCA was highly valued.

College of Sciences Research Symposium. The research symposium began in 1998 as a way to showcase the work of undergraduate students who were engaging in a research project with a faculty mentor. The symposium is supported by funds provided by the National Institutes of Health MARC and MBRS programs, the Department of Education funded McNair program and the National Science Foundation funded CSEM program in Engineering. It is open to all undergraduate students in the College of Sciences and has been expanded to include students in the College of Engineering. Most

students are juniors or seniors, with approximately 40 – 50 students participating each year with the assistance of 35 – 40 faculty mentors. Students submit an abstract for either a poster session or an oral communication session. Their work is reviewed by a panel of three judges. All participants receive a certificate for their participation. In addition, each scientific category awards a first, second, or third place.

The Coordinating Council subcommittee thought this symposium might be a good example of how an existing form of directly measuring student learning could be used in multiple ways. For competition purposes, scores are aggregated across all categories to obtain a summed score for each student. In addition, students receive feedback from the judges' scores that can assist their learning. However, data from the symposium have not been examined as a form of assessment that would allow feedback to be sent to faculty mentors and used for program improvement. Thus, we asked the coordinators of the symposium if they were interested in acquiring this kind of feedback. They graciously agreed and supplied the Division of Undergraduate Studies with an excel spread sheet of all participants' mean scores.

This year 50 students participated in the event. Judges use a rating form (see poster and oral scoring sheets) that defines several criteria, each of which is scored on a scale from 1 (low) to 5 (high). These data were then used to calculate overall means for all symposium participants in each category of the scoring form as well as the percent of students achieving either a score of 3 or greater or 4 or greater. Examination of these summary tables provides rich information about student strengths and weaknesses.

Rating forms were divided into areas that yield insight into student learning. There are several categories under "research" and several other categories for "poster display" or "oral presentation." For the poster competition, mean scores ranged from 3.5 to 4.8 [See Table 10] on a 5-point scale while the means for the oral competition ranged from 3.6 to 4.5 [See Table 12]. In both cases, the lower scores were in categories included under "research" that required a higher level of student learning (e.g., data/results summaries and conclusions; future directions for research) while higher scores were in areas listed under "poster display" or "oral presentation," such as correct spelling and grammar.

The data were also examined by tabulating the percent of students receiving certain scores. Results indicated variations in student performance across the scoring categories. For example, if a score of 3 or higher is used as a criterion for acceptable work for the poster competition [See Table 11], the percent of students achieving this criterion ranges from 73% (for references) to 97% for conclusions and statement of problem/hypothesis. However, if a score of 4 or higher is used as the criterion the percentage of students achieving the criterion drops significantly and ranges from 43% (for references) to 70% for introduction. The same pattern occurs when examining the oral competition [See Table 13]. When a score of 3 or higher is used as a criterion, the percentage of students achieving 3 or higher ranges from 95% to 100% for the research components and 90% to 100% for the presentation components. However, when the criterion is raised to 4 or higher these percentages drop to 40% to 70% for the research components and 55% to 85% for the presentation components.

The results of this analysis can lead to improved student learning. Faculty participants in the symposium might gather together and discuss the findings. In terms of student learning, are they satisfied with the level of competence students displayed for the research components? How could they alter their time with students to provide additional mentoring in the lower scored components? What might the benefits be to engaging in these discussions for improving the program and student learning? At the current time, no conversations have taken place. However, the results have been shared with program coordinators who will determine how best to act on the findings.

Direct Measures of Student Learning from RSCA-centered Capstone Courses and Distributed Independent Research Projects. In the interests of defining and directly measuring the student learning gains resulting from undergraduate RSCA, several departments were identified by the Coordinating Council subcommittee for their demonstrated commitment to the involvement of undergraduates in original scholarship. All of these departments share in common either a required capstone course for majors which involves a significant original research, design, or collaborative performance project, or broadly distributed and commonplace independent research projects conducted within research groups and facilities under the direction of individual faculty members.

The participating departments were approached by the Division of Undergraduate Studies (DUS) to initiate the creation or revision of assessment instruments used in conjunction with capstone course projects or student-led independent research projects. In all cases, faculty members were gathered in each department to meet with the DUS Assessment Coordinator and professional staff for a structured discussion about the nature of the RSCA experiences of undergraduates in each department. Discussions focused on pre-requisite preparation for RSCA, scope and sequence related to the placement of scholarly activities in the undergraduate curriculum, and the range of learning outcomes the assembled faculty felt were the goals of the RSCA experience.

During each faculty group discussion the goal was to review, modify and/or develop new assessment instruments designed to capture measures of each of the key learning goals identified by the faculty committees. In all cases, these instruments were designed in a scoring rubric format, recording relative levels of student competency with Likert-style numerical rankings. It was critical that the individual items on the newly constructed rubrics represented the goals, norms, standards, and expectations appropriate to each discipline. There was no effort to impose any university-wide standard set of learning outcomes. Rather, the goal was to foster a sense of ownership of the assessment instrument and activity in each department. Thus, the measures and dimensions of student performance and learning had to be rooted entirely in each academic discipline.

DUS staff prepared initial versions of assessment rubrics for participating departments (presented later), and then submitted these back to the faculty committees to be vetted for content, language, scoring standards, and format. Each department committee made changes and submitted an edited version of the rubric to DUS for archiving. Students in

capstone courses and/or supervised independent research projects were then assessed using these instruments, where possible, during the spring of 2005.

In total, eight departments from four colleges across the participated in at least the initial stages of discussion of existing assessment activities and new assessment instrument construction. Five completely vetted new assessment rubrics were constructed during spring 2005 and three of these were successfully used by participating departments. Descriptions of each of the participating departments and the data collected are summarized below, and links have been provided to the completed rubrics themselves and collected data where available.

Theatre, TV and Film. Assessment activities focused on Theatre 425, a capstone production design course taken typically by seniors in either the fall or spring semesters. This required course has students working in groups with assigned roles (director, dramaturge, set designer, costume designer, actors, lighting and sound design) to construct a unified creative vision for an assigned play common to the entire class. Each member and each group is expected to be individually creative and also work with the group to unify their visions and design and present a proposed production. Students must be able to draw on their collected technical skills and experiences in order to present a complete production design at the end of the semester, including drawings, samples, or interpretations as appropriate. The course is designed to mimic the actual process of preparing real theatrical productions.

Twenty-seven students in the course were individually assessed based on their final presentations and work during the course of the project using an 11-item scoring rubric. Analysis of the data [See Table 14] by Theatre faculty and DUS staff showed that in general, students are meeting the identified learning outcomes well (roughly three-fourths of the students in the course demonstrated adequate or better competency in all areas), but also indicated a few key strengths and weaknesses and insights for curricular improvement. Students demonstrated a high level of competency in their background research skills in their particular sub-discipline (Item 5: 93% demonstrating adequate or better competency; 63% demonstrating mastery of this skill), and the ability to transfer specific technical skills learned in lower-level courses to the execution of the integrated project (Item 6: 85% demonstrating adequate or better competency; 74% demonstrating mastery). Analysis of the department curriculum shows that it is designed to introduce these skills early, reinforce them often, and then bring them to bear in this final project.

This complete curricular cycle does not exist for skills related to collaboration and the management of interpersonal dynamics in a creative team. While it is readily recognized by Theatre faculty that these skills are critical to the successful functioning of theatre production teams, students are not uniformly well prepared for this in the existing curriculum. This is shown by the relatively large percentage (25-30%) of students scoring low on items related these skills (Items 2, 4, and 9 on their rubric), coupled with the observation that the students who consistently did well in this area had independently pursued collaborative and managerial roles in extra-curricular student productions. These data have motivated the Theatre faculty to open discussions of how and where to

build in collaborative work at earlier stages of their curriculum, following the successful approach used to build other skills in the major.

Use of this assessment rubric also resulted in identifying items that were missed in the original construction of the rubric, and has led to the adjustment of the wording and placement of a few items. These activities have proven to be a valuable formative assessment for the Theatre curriculum, and also for the assessment tools themselves.

Exercise and Nutritional Sciences (ENS). In spring 2005, an assessment of student learning outcomes was performed in the undergraduate exercise physiology lab course, ENS 304L Exercise Physiology Lab, which is required of all ENS majors. Typically, 20-21 sections are offered each academic year, and the course has an annual enrollment of approximately 275 students who take the course generally in their junior year. Although the department does not have a capstone course, this lab course requires students to utilize a variety of skills gained from other courses. The course is taught primarily by graduate teaching assistants (TAs) selected by the course director. Throughout the semester, the course director meets weekly with new TAs to discuss the upcoming labs and student-led research projects. The course director and TAs review and, if needed, modify student research proposals to ensure that student projects are well designed, have adequate controls, and that the necessary measurements are taken.

A new rubric, with a scale ranging from 1 to 5, was designed based on the insights gained from a meeting of five exercise physiology faculty members, and was subsequently revised and vetted by the ENS faculty. After the initial use of this instrument, ENS faculty reported that Cronbach's alpha (measuring internal consistency of the scoring rubric) was high ($\alpha = .94$) as was inter-rater reliability ($R = .90$). Thus, the individual items measured the underlying construct of the rubric well and the three reviewers independently rated the presentations and papers similarly.

Table 15 provides descriptive data from this project. The combined average score was 3.1 ± 1.1. [See detailed results and a complete report]. The lowest overall score occurred on *Question 8*, which assessed statistical analysis skills (1.5 ± 1.0) and the highest was the overall score of *Questions 10* and *11* (3.7 ± 1.0), which assessed ability to deliver an oral and written report. Excluding *Question 8*, the other overall scores were similar and ranged from 3.1 to 3.7. Because scores appeared to vary based on the TA, the scores were separated by instructor (TA1 and TA2) and re-analyzed. Overall scores from students taught by TA1 (n = 7 labs; 29 students) and TA2 (n = 4 labs; 21 students) were 2.6 ± 1.0 and 4.0 ± 0.9, respectively ($p < 0.001$).

The two primary findings of this assessment were that: (1) students were unable to demonstrate satisfactory skills with basic statistical analysis techniques; and (2) learning outcomes were significantly affected by the instructor. Although students in TA2's sections scored higher on *Question 8*, most groups had difficulty in utilizing basic statistical skills to analyze their data. Including statistical analysis of lab data is not a requirement, but it is encouraged by most lab instructors. Most, but not all, students had completed or were currently enrolled in ENS 305 *Measurement and Evaluation in Kinesiology* where they were exposed to statistical analyses, but perhaps these skills are

not adequately reinforced throughout the major. Nonetheless, students either lacked the ability or the confidence to use their statistical skills on an applied problem. These findings also convincingly reflect the need for close faculty mentoring and supervision of TAs in the lab course to ensure consistency in instruction and research design. The ENS department has used this information to produce recommendations to improve on these issues, including improvements in TA mentoring and increased emphasis on statistical analysis approaches throughout the curriculum.

Psychology. The Psychology department has no specific research capstone course, but the department has a pervasive and long-standing commitment to training students in research and to involving them in authentic research activities. It is also the second largest major on campus with 1,750 enrolled majors, so required capstone courses are impractical for this number of students. Because of the very strong research orientation of the program, students are encouraged to engage in independent research in any number of laboratories overseen by the faculty. Approximately 40 faculty members have undergraduate students actively involved in their labs' research efforts, and the department estimates that approximately 280 students pursue research projects in any given semester. Independent research is conducted for course credit as Psychology 499, 498, and/or 497. Psychology 499 is a basic independent study agreement to conduct research, and 498 and 497 involve additional directed research after 499, which may lead to an honors senior thesis. The department does require that all undergraduates take either (or both) Psychology 301 and 410, which are introductory and advanced research methods courses, respectively. However, because these courses are largely methods and not project-oriented, there is no authentic research component to either course.

In constructing an appropriate assessment rubric for Psychology 497, 498, and 499, the distributed nature of these experiences added the challenge of making sure the outcomes assessed were applicable in the widest possible variety of psychological research groups. The DUS Assessment Coordinator met with the department assessment coordinator/undergraduate advisor on many occasions, and with his help was able to convene a committee of psychology faculty, including the department chair who (1) had a very broad perspective on all aspects of psychological research, and (2) had extensive experience managing undergraduate research in their personal research programs. From this meeting, a new rubric was drafted by DUS, and sent out to the entire research-active psychology faculty. Their comments were collected and edits were made to the rubric by the departmental assessment coordinator.

Given the complexity of assessing multiple distributed research projects with an untested, new rubric, the decision was made to pilot the instrument in spring 2005 in the undergraduate advisor/assessment coordinator's own research group. Only 8 students were assessed by this new instrument, but it was enough to make sure the instrument was usable and relevant, and also provided interesting insights with this limited data set [See Table 16]. While one must be careful not to over interpret limited data from only one lab where student performance was generally very good, there are some findings from these pilot data with potential relevance to the Psychology curriculum. While students were able to skillfully and consistently transfer technical skills and analytical abilities to their research work (Items 5 and 6 – means of 4.6 and 4.8 out of 5 with a

standard deviation of only 0.5), there was a slightly lesser ability to place their specific research topic into the broader context of psychological research (Item 1, mean = 3.9, S.D. = 0.6). In general there was slightly lower performance and higher variance for all items relating to the larger context of the field and research design compared with technical and mechanical skills. These results suggest an opportunity to build elements into the preparatory Psychology 301/410 courses, which introduce independent research design and reinforce strategies for choosing from among the range of possible approaches to a variety of research questions. However, more data from more types of research labs must be collected in subsequent semesters to see if this finding is borne out.

Civil and Environmental Engineering. The Civil and Environmental Engineering major requires that students take a capstone design course, Civil Engineering 495, Civil Engineering Design. Students are assembled into groups of 3 to 5 students and are tasked with developing a solution to a given typical civil engineering problem, such as designing a bridge, dam, or other significant structure. Students work collaboratively and present their solution in a formal presentation in front of the faculty, peers, and professionally active alumni at the end of the course.

While the department has a relatively well expressed set of curriculum-wide learning goals established, and has mapped these goals to the various courses in the core majors sequence, the specific learning gains expected of this design course have not been fully articulated and a specific rubric based on these goals has not yet been developed for this course. However, the department has been interested in student learning outcomes for some time, and has developed a rubric for this course that is used for evaluating student final presentations and projects by both faculty and external evaluators. We collected these data [See Table 17] from the spring 2005 administration of this instrument. The instrument is largely used to judge whether or not sets of specific tasks have been completed by project groups, which results in uniformly high scores and low variance in general, but there are specific items that can be related to student learning goals from independent design projects. The items most relevant to the expressed goals are Items 6, 8, 9, 10, 11, and 13. All of these items had a maximum score of 5 points.

The data from the spring 2005 semester (n = 9 groups) indicate that students can consistently and skillfully show connections between their formal technical training and real world applications (Item 6, mean = 5.0, SD = 0), and can readily demonstrate a good understanding of the specific, technical content areas involved in completing aspects of the project (Item 8, mean = 4.8, SD = 0.67). Data also show that each student in each group can readily identify skills they learned anew or improved in order to complete the project (Items 10 and 11, mean = 4.9 for both, SD = 0.33 for both), although the instrument in its current form yields no insight into which specific skills were improved or learned. Thus, implications for continued curricular improvement are not immediately clear. An area for improvement may be indicated by Item 9 (mean = 4.1, SD = 0.78), which measures the degree of attention to detail and commitment to quality work demonstrated by groups. However, the mean is still relatively high, and the variance is relatively low, so most students appear to be at least adequate in this regard and again it is not obvious how to interpret this in terms of curricular change.

The department is eager to pursue the development of a new instrument to assess learning in this course along the lines of those developed by DUS with departmental input elsewhere on campus. This work should proceed in the fall of 2005 and provide data for curriculum improvement by spring of 2006.

Two other departments in the College of Engineering also have capstone experiences for which a rubric was developed and vetted with department faculty. Both Mechanical Engineering and Aerospace Engineering anticipate initial use of these instruments during the 2005-06 academic year.

Anthropology. The Anthropology major has no required capstone course, but does feature summer field courses that include authentic research experiences plus instruction in field research logistics and project budgeting. There are two primary field courses offered, and attendance is strongly encouraged for majors, especially those considering research careers.

Meetings between DUS staff and Anthropology faculty members resulted in a decision to focus on the field courses as an assessment target, and possibly on a research ethics course as well. Relevant student learning goals were identified and rubric construction has begun. The summer field season, however, began without a fully vetted rubric in place. As a result, no data will be available for the 2005 field courses; rubric development and a further focusing of learning outcomes will continue in fall 2005. We anticipate data being collected for the 2006 summer field season.

Biology. The Biology department, like the SDSU Psychology department, has a very large population of majors, over 1,000. As such, there is also no required capstone research course, but the department shares a similar emphasis on distributed undergraduate research projects under the supervision of individual faculty in their research groups.

After many formal and informal meetings between DUS personnel and biology faculty members, we have assembled a diverse committee representing all of the sub-disciplines within the department. We were not, however, able to assemble this group for a learning outcomes discussion before the end of the spring 2005 semester, so we anticipate moving these discussions forward over the summer and into fall 2005. We anticipate building on the relative success of the Psychology 499 rubric, and adapting it to fit the field-specific learning outcomes of the Biology department.

General Findings From Departmental Student Learning Assessments
Despite the wide diversity of academic disciplines represented by the departments with whom DUS personnel have been working on this project, we discovered a number of learning outcomes that are shared by virtually all of these disciplines in terms of the expected benefits of undergraduate research, scholarship, and creative activity. Analysis of these common goals may be instructive in ongoing university-wide efforts to better define and streamline the General Education portion of the undergraduate curriculum.

Common Goals for Student Learning From Undergraduate RSCA.
- Students should be able to work constructively in interdisciplinary teams, and must learn to compromise and adapt to establish a common vision.
- Students need to be able to gather information relevant to their research, either from published sources or direct observations, and be able to critically judge the quality of the information they find.
- Students must be able to think of research activities at the system scale, bringing appropriate skills to bear with an awareness of how one portion of a design or project will affect all others.
- Students must be able to monitor their own understanding throughout a project and ask appropriate and useful questions to advance their own knowledge and their project.
- Students should develop a sense of context in their disciplines, understanding how all the sub-fields of research in the discipline interact and form the totality of their academic field.
- Students should be able to orally and in writing present and defend their work, vision, and/or conclusions. They must be able to articulate what they have learned to peers and superiors alike.

It was notable that almost none of the goals for undergraduate research, scholarship or creative activities included an emphasis on mastery of technical skills. Most departments place the emphasis on that aspect of student learning on the courses "upstream" from capstone experiences, and instead encourage students to apply those skills in context by the time they encounter authentic scholarly activity. The vast majority of goals for all types of undergraduate RSCA centered on those skills around the core technical knowledge that lies at the center of each discipline. Issues of context, interaction, applicability and the fostering of a broader perspective — all items not normally found on a course syllabus — seemed to form the central goals of RSCA experiences.

Summary and Challenges
Our inquiry demonstrates that multiple opportunities exist for undergraduate student engagement in RSCA and survey and interview results clearly indicate that most department chairs/directors and faculty members believe strongly in the importance of undergraduate student engagement in these activities. It was also evident that differences between disciplines in terms of how RSCA is defined are not always apparent or recognized campus-wide. Further, the RSCA hierarchy of quality experiences and the designation of "real" research as applying to graduate students present challenges for implementing curricular initiatives to increase undergraduate student involvement in RSCA. In addition, the overwhelming use of the word "research" as the recognized "legitimate" RSCA experience and the concomitant limited statements about other categories of RSCA are likely to have resulted in significant underreporting of the wide-range of RSCA that take place for SDSU undergraduates. During the faculty interviews several other words were used to describe RSCA that may best be captured by the term 'inquiry-based' practice. These findings may lead to a campus conversation about the kinds of activities that faculty believe are important for student engagement (e.g., application of what they learned in class; evidence-based practice; collaborating with others; community of scholars) that would better assist us in

defining the breadth of activities undergraduate students can engage in to achieve these goals.

It is clear that the importance of RSCA for undergraduates rests in their coming to know their chosen field as a practitioner, and to understand the human and intellectual dynamics of their field in a way that underlies and transcends technical competence. As such, undergraduate RSCA experiences are a critical part of the undergraduate education we hope to impart within a research-oriented university, and should be encouraged and given the faculty resources and recognition needed for these activities to flourish.

In terms of efforts to further a culture of evidence, assessment, and continuous improvement of the undergraduate curriculum at SDSU, we have also learned from undertaking this inquiry that the barriers to fuller implementation of assessment on this campus are probably *not* related to simple faculty resistance. The consultative and personal approach used in this project for helping faculty understand their student learning objectives was remarkably effective at engaging faculty in the process of assessing educational effectiveness. We suspect based on our experience that perceived faculty resistance to assessment of student learning is actually based in uncertainty in how to proceed. Once DUS Assessment staff were able to deliver directed, specific help to faculty by developing first drafts of field-specific assessment instruments for them to review, we found faculty became engaged, enthusiastic, and very willing to learn more about their students' learning. Perhaps a personal, bottom-up strategy combined with top-down vision and directives can provide a new road to full implementation of assessment programs at SDSU.

Our reflection on the multiple kinds of evidence we gathered leads us to identify the following challenges:

- ❖ To reach agreement about the kinds of opportunities that represent RSCA, discuss the value of these activities, and then align university resources that recognize the time commitment for faculty involvement through adjustments to faculty workload calculations in order to provide additional opportunities for student engagement in these activities;

- ❖ To increase faculty development support to assist with the development of clear student learning outcomes related to RSCA and appropriate measures of student learning;

- ❖ To discuss and explore strategies for developing an incentive/reward system for faculty that communicates the value of engaging undergraduate students in RSCA;

- ❖ To create a more robust infrastructure that supports coordinated and systematic efforts to track student participation in RSCA and the impact these activities have on student learning;

❖ To discuss strategies for showcasing and celebrating student engagement in RSCA to promote student learning.

Strategic Thinking and Planning

All three essays reveal the fact that, given our resource base and the many pressures on higher education, we will have to be increasingly strategic if we are going to increase our level of effectiveness. Our work over the past three years, and as reflected in these essays, suggests that many individuals on campus have begun to see strategic planning as a core commitment.

More generally, and taken together, the three themes that have emerged as the result of our work are indicative of a cultural shift that extends beyond the cases on which we have focused the Educational Effectiveness Report. We have, for example, made significant progress over the past three years with regard to retention and graduation rates of first-time freshmen. The externally funded People, Information, Communication, and Technology (pICT) program designed to help faculty integrate ICT skills into general education courses has at its core a focused commitment on student learning outcomes. In addition, the considerable planning that has gone into our preparation for our first ever capital campaign has already sharpened our vision of the university's future.[3]

While the themes that have emerged from our reflection reinforce the significant steps forward that have been made, we are also aware that these steps are somewhat tenuous, and the institution will have to commit to a sustained focus on all three fronts if we are going to continue to move ahead. A cultural shift can begin in three years but it will take many more years before it is fully realized. A number of specific challenges are suggested in the preceding essays, but several challenges cut across all three areas and, in fact, involve the entire university. We must meet these challenges as we continue to develop as a learning organization.

Institutionalizing a Culture of Inquiry

Our continued effectiveness as a university will depend on our ability to engage in evidence-based decision making. Our essays detail many examples of evidenced-based decision making on campus, but these efforts are not yet systematic or consistent. For example, our progress on student learning outcomes assessment across departments and colleges is still uneven. Institutionalizing a culture of inquiry can only be accomplished through a combination of bottom-up strategies and top-down vision and directives. We offer the following recommendations to continue our progress.

1. Examine procedures for Academic Plans and Academic Reviews and revise them, if necessary, to emphasize evidence of educational effectiveness that includes, but is not limited to, student learning assessment activities.

2. Develop and implement a comprehensive plan for support of evaluation of program quality and effectiveness, including student learning outcomes assessment, across the university.

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[3] These additional examples of the cultural shift taking place on campus are described fully in the appendix to this report.

3. Revise procedures for Academic Plans and Academic Reviews to include the examination of progress in retention and graduation rates at the department/program level.

4. Increase the number of staff in the Office of Institutional Research to support the requests for data that will result from the institutionalization of inquiry.

5. Use the SDSU website to make public our progress in all campus units. This might include, but is not limited to, publishing student learning outcomes assessment plans and annual reports and results of surveys regarding student perceptions of all campus services.

Linking Learning and Planning

San Diego State University's history of decentralized governance has been effective in helping us achieve our present level of success. As we move forward and face significant challenges, enrollment management for example, we need to link planning efforts (resource allocation, retention and graduation rates) with a sustained focus on student learning. [4] This will entail finding mechanisms and organizational structures that bring together on a regular basis units that, for the most part, work independently. Currently, decisions about student enrollment, FTES targets, faculty lines, etc., are made by one part of the university while support for and decisions about student learning and outcome assessment fall under the auspices of another office. And curricular decisions related to general education or programs in the major fall under the oversight of the University Senate. Further, the Office of Testing, Assessment, and Research resides in still another division (outside of academic affairs). We therefore suggest that San Diego State University:

1. Re-frame the access, retention, and graduation discussion toward an emphasis on indicators of educational effectiveness so that we systematically track the success of all our students on more than one scale. (For example: NSSE data, retention and graduation rates, units to degree, etc.)

2. Focus on general education as a means for determining optimal systemic planning related to student learning.

Supporting Faculty

San Diego State University is entering a period during which the Provost will be working with deans and department chairs to rebuild the number of tenure-track faculty following a three-year moratorium on hiring. Already, for 2005-2006, the Provost has authorized nearly 100 searches and it is likely, barring another severe budget crisis, that this pace will continue for the next several years. While hiring new faculty must be of

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[4] We have witnessed a three-year decline in graduate enrollment and because all campuses in the CSU system have overall enrollment targets, this inversely impacts undergraduate enrollment. As we have noted elsewhere, we expect that enrollment pressures from students applying to undergraduate programs will continue to be intense.

the highest priority, our recommendation is that attention be paid during this time to support for faculty as they seek to balance the demands of teaching and scholarship.

An emphasis on student learning means a shift in the teaching/learning perspective: away from delivery of content and toward pedagogical strategies that involve active learning. This paradigmatic shift not only requires optimizing our faculty development resources but also means that other decisions about curricular offerings, class schedules, class size, and who is teaching our courses need to balance both budgetary and student learning concerns. Evidence presented across all three essays detail the challenges faculty members face as they try to meet the increasing requirements for teaching, scholarship, and service. We thus recommend that San Diego State University:

1. Increase faculty development support to enhance the skill sets necessary to emphasize active learning techniques and programmatic examination of student learning.

2. Align incentive/reward systems that communicate the importance of engaging in student learning assessment and enhancing faculty-student interactions inside and outside the classroom.

3. Develop ways to support faculty members' engagement in curricular innovation that is learning-centered and includes student learning outcomes and direct measures of student learning.

Conclusion

The Carnegie Foundation for the Advancement of Teaching is revising its classification system for higher education institutions.[5] Just as the Carnegie Foundation has had to rethink its classification system to reflect the changing face of higher education, San Diego State University has used the reaccreditation process to rethink its core commitments in light of emerging challenges. Chief among these—and also in the foreground for the Carnegie Foundation—is a focus on student learning. Our self-study has led us to think more systematically about the importance of student learning and to consider more broadly our ability as an institution to learn. This ability is perhaps the most important we can develop given the rapidly changing demographics in California, projected shifts in state support for higher education here and nationally, and the increased focus on learning and assessment that is likely to continue to come from the private sector, legislators, parents, the federal government, and students themselves.

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[5] Drafts of this change are already public and the official release of the new system will have taken place before our Educational Effectiveness site visit in November.

Appendix A
Data Tables

Table 1
Ethnic Composition: Dual Admits Vs. First Time Freshmen
Fall 2002 – Fall 2004

Ethnicity	DA Fall 2002	FTF Fall 2002	DA Fall 2003	FTF Fall 2003	DA Fall 2004	FTF Fall 2004
American Indian	2 (.7%)	29 (.7%)	1 (.4%)	20 (.5%)	0 (0%)	20 (.5%)
African American	17 (5.8%)	205 (5.0%)	15 (6.3%)	137 (3.7%)	17 (8.5%)	143 (3.5%)
Hispanic	83 (28.3%)	723 (17.6%)	80 (33.8%)	658 (17.7%)	62 (31.0%)	796 (19.4%)
Asian	24 (8.1%)	324 (7.9%)	13 (5.5%)	333 (8.9%)	17 (8.5%)	297 (7.2%)
Pacific Islander	2 (.7%)	30 (.7%)	1 (.4%)	26 (.7%)	4 (2.0%)	38 (.9%)
Filipino	70 (23.9%)	283 (6.9%)	36 (15.2%)	257 (6.9%)	35 (17.5%)	311 (7.6%)
White	67 (22.9%)	2,049 (49.9%)	61 (25.7%)	1,961 (52.7%)	51 (25.5%)	2,100 (51.1%)
Other/Not Stated	26 (8.9%)	429 (10.4%)	27 (11.4%)	285 (7.7%)	13 (6.5%)	370 (9.0%)
International	2 (.7%)	35 (.9%)	3 (1.3%)	42 (1.1%)	1 (.5%)	36 (.9%)
Total	293 (100%)	4,107 (100%)	237 (100%)	3,719 (100%)	200 (100%)	4,111 (100%)

Note. Percentages in table are COLUMN percentages

Table 2
Ethnic Composition of Comparison Group Vs Dual Admits Fall 2002

Ethnicity	Comparison Group Fall 2000	Dual Admit Fall 2002	Dual Admit Fall 2003	Dual Admit Fall 2004
American Indian	2 (.8%)	2 (.7%)	1 (.4%)	0 (0%)
African American	13 (5.4%)	17 (5.8%)	15 (6.3%)	17 (8.5%)
Hispanic	71 (29.7%)	83 (28.3%)	80 (33.8%)	62 (31.0%)
Asian	21 (8.8%)	24 (8.1%)	13 (5.5%)	17 (8.5%)
Pacific Islander	3 (1.3%)	2 (.7%)	1 (.4%)	4 (2.0%)
Filipino	32 (13.4%)	70 (23.9%)	36 (15.2%)	35 (17.5%)
White	68 (28.5%)	67 (22.9%)	61 (25.7%)	51 (25.5%)
Other/Not Stated	27 (11.3%)	26 (8.9%)	27 (11.4%)	13 (6.5%)
International	2 (.8%)	2 (.7%)	3 (1.3%)	1 (.5%)
Total	239 (100%)	293 (100%)	237 (100%)	200 (100%)

Note. Percentages in table are COLUMN percentages

Table 3
Continuation Rates for Dual Admit and Comparison Group by Ethnicity
Fall 2002 Cohort

Dual Admit Ethnicity	Number of students enrolled at CC Fall 2002	1-Year Continuation Rates	2-Year Continuation Rates	Comparison Group Ethnicity	Number of Students	1-Year Continuation Rates	2-Year Continuation Rates
American Indian	2	0 (0.0%)	0 (0.0%)	American Indian	2	1 (50.0%)	1 (50.0%)
African American	17	8 (47.1%)	5 (29.4%)	African American	13	4 (30.8%)	3 (23.1%)
Hispanic	83	42 (50.6%)	29 (34.9%)	Hispanic	71	35 (49.3%)	33 (46.5%)
Asian	24	17 (70.8%)	10 (41.7%)	Asian	21	10 (47.6%)	8 (38.1%)
Pacific Islander	2	1 (50.0%)	1 (50.0%)	Pacific Islander	3	0 (0.0%)	0 (0.0%)
Filipino	70	55 (78.6%)	42 (60.0%)	Filipino	32	14 (43.8%)	12 (37.5%)
White	67	41 (61.2%)	35 (52.2%)	White	68	39 (57.4%)	35 (51.5%)
Other/Not Stated	26	17 (65.4%)	10 (38.5%)	Other/Not Stated	27	14 (51.9%)	13 (48.1%)
International	2	1 (50.0%)	1 (50.0%)	International	2	2 (100.0%)	1 (50.0%)
Total	293	182 (62.1%)	133 (45.4%)	Total	239	124 (51.9%)	111 (46.4%)

Note. Percentages in table are ROW percentages.

Table 4
One-Year Continuation Rates for Dual Admit and Comparison Group by
Ethnicity
Fall 2003 Cohort

Dual Admit Ethnicity	Number of Students Enrolled at CC Fall 2003	1-Year Continuation Rates	Comparison Group Ethnicity	Number of Students	1-Year Continuation Rates
American Indian	1	0 (0.0%)	American Indian	2	1 (50.0%)
African American	15	7 (46.7%)	African American	13	4 (30.8%)
Hispanic	80	42 (52.5%)	Hispanic	71	35 (49.3%)
Asian	13	8 (61.5%)	Asian	21	10 (47.6%)
Pacific Islander	1	1 (100.0%)	Pacific Islander	3	0 (0.0%)
Filipino	36	25 (69.4%)	Filipino	32	14 (43.8%)
White	61	44 (72.1%)	White	68	39 (57.4%)
Other/Not Stated	27	19 (70.4%)	Other/Not Stated	27	14 (51.9%)
International	3	2 (66.7%)	International	2	2 (100.0%)
Total	237	148 (62.4%)	Total	239	124 (51.9%)

Note. Percentages in table are ROW percentages

Table 5

Percentage of Students Graduated or Continued at SDSU by Ethnicity
Local Community College Transfer Students

Ethnicity	FALL 2000					FALL 2001				FALL 2002			FALL 2003	
	Enrl	Cont or Grad				Enrl	Cont or Grad			Enrl	Cont or Grad		Enrl	Cont or Grad
		After Year 1	After Year 2	After Year 3	After Year 4		After Year 1	After Year 2	After Year 3		After Year 1	After Year 2		After Year 1
American Indian	9	100.0%	77.8%	77.8%	88.9%	6	100.0%	100.0%	100.0%	7	85.7%	85.7%	12	91.7%
African American	46	78.3%	69.6%	76.1%	71.7%	46	84.8%	73.9%	58.7%	48	68.8%	64.6%	72	86.1%
Hispanic	245	82.9%	76.3%	69.4%	69.4%	276	80.4%	76.4%	71.7%	333	84.4%	74.5%	458	83.8%
Asian/Pacific Islander	67	83.6%	76.1%	73.1%	68.7%	90	90.0%	82.2%	77.8%	106	84.9%	80.2%	160	83.1%
Filipino	84	84.5%	78.6%	76.2%	77.4%	81	72.8%	71.6%	66.7%	89	79.8%	76.4%	122	77.9%
White	453	85.7%	77.7%	73.7%	75.3%	468	85.5%	78.0%	76.5%	482	87.6%	80.1%	686	85.3%
Other/Not Stated	231	85.3%	80.1%	74.5%	75.8%	214	88.8%	79.9%	75.7%	213	81.7%	75.6%	227	85.9%
International	55	92.7%	90.9%	90.9%	89.1%	71	93.0%	84.5%	88.7%	63	87.3%	79.4%	58	86.2%
All Students	*1,190*	*85.0%*	*78.2%*	*74.0%*	*74.5%*	*1,252*	*84.9%*	*78.2%*	*74.9%*	*1,341*	*84.4%*	*77.2%*	*1,795*	*84.4%*

Table 6

SDSU Cumulative Graduation Rates by Ethnicity

Local Community College Transfer Students

Ethnicity	FALL 2000				FALL 2001			FALL 2002	
	Enroll	Within 2 years	Within 3 years	Within 4 years	Enroll	Within 2 years	Within 3 years	Enroll	Within 2 years
American Indian	9	2 22.2%	5 55.6%	7 77.8%	6	1 16.7%	2 33.3%	7	1 14.3%
African American	46	9 19.6%	20 43.5%	22 47.8%	46	7 15.2%	18 39.1%	48	6 12.5%
Hispanic	245	39 15.9%	107 43.7%	142 58.0%	276	56 20.3%	130 47.1%	333	77 23.1%
Asian/Pacific Islander	67	9 13.4%	26 38.8%	39 58.2%	90	11 12.2%	44 48.9%	106	23 21.7%
Filipino	84	20 23.8%	43 51.2%	56 66.7%	81	16 19.8%	37 45.7%	89	22 24.7%
White	453	108 23.8%	259 57.2%	313 69.1%	468	123 26.3%	280 59.8%	482	154 32.0%
Other/Not Stated	231	47 20.3%	125 54.1%	155 67.1%	214	51 23.8%	122 57.0%	213	54 25.4%
International	55	22 40.0%	44 80.0%	46 83.6%	71	20 28.2%	53 74.6%	63	29 46.0%
All Students	*1190*	*256 21.5%*	*629 52.9%*	*780 65.5%*	*1252*	*285 22.8%*	*686 54.8%*	*1341*	*366 27.3%*

54

Table 7
Results of *"The College Student Report"*
Educational and Personal Growth Section

To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

Response values: 1 = Very little   2 = Some   3 = Quite a bit   4 = Very much

Question	SDSU Seniors	Doctoral Intensive Seniors
Acquiring a broad general education	3.19 ± .78 (81%)	3.20 ± .81 (82%)
Acquiring job or work-related knowledge and skills	2.74*** ± .99 (60%)	3.02 ± .93 (72%)
Writing clearly and effectively	2.89* ± .86 (67%)	3.01 ± .87 (72%)
Speaking clearly and effectively	2.71*** ± .88 (60%)	2.91 ± .89 (68%)
Thinking critically and analytically	3.18** ± .79 (81%)	3.31 ± .77 (85%)
Analyzing quantitative problems	2.81 ± .89 (64%)	2.91 ± .91 (67%)
Using computing and information technology	2.99*** ± .92 (70%)	3.22 ± .84 (80%)
Working effectively with others	3.00 ± .89 (72%)	3.07 ± .86 (75%)
Voting in local, state, or national elections	1.85** ± .96 (24%)	1.67 ± .90 (17%)
Learning effectively on your own	2.92 ± .93 (69%)	3.00 ± .87 (73%)
Understanding yourself	2.64 ± .99 (55%)	2.70 ± 1.01 (59%)
Understanding people of other racial and ethnic backgrounds	2.60 ± .97 (53%)	2.52 ± .98 (49%)
Solving complex real-world problems	2.53* ± .93 (50%)	2.67 ± .95 (56%)
Developing a personal code of values and ethics	2.33** ± .1.00 (40%)	2.54 ± 1.03 (51%)
Contributing to the welfare of your community	2.03*** ± .92 (26%)	2.25 ± 1.00 (37%)

Table provides means, standard deviations, and (percentage of students responding "Quite a bit" or "Very much")*$p < .05$ ** $p < .01$ ***$p < .001$ [Effect sizes ranged from .13 to .32]

Table 8
Liberal Studies 300 In Class Assignment (12 Weeks)
Percent of Students Achieving "Good" or "Adequate"
Fall 2004

Section	Goal Statement	Development of Main Idea	Specific Examples
A [N = 31]	81%	71%	39%
B [N = 30]	57%	50%	27%
C [N = 28]	71%	46%	64%
D [N = 26]	88%	88%	87%
E [N = 30]	100%	60%	77%
F [N = 29]	48%	38%	60%
G [N = 15]	87%	67%	13%
H [N = 24]	71%	33%	17%
TOTAL [N = 213]	75%	56%	49%

Table 9
Liberal Studies Portfolio Project
Capstone Essay

Portfolio #	Introduction, Thesis, Compare/Contrast Section (3 Points)	Goals, Processes, Standards of Evaluation (6 Points)	Implications for Teaching (3 Points)	Quality & Appropriate Use of Supporting Examples (9 Points)	Writing Quality: Technical, Stylistic, Structural (9 Points)	Total Score (30 Points)
44	2.5	3	3	7	4	19.5
37	2	5	3	7	7	24
72	1	6	2	7	5	21
18	2.5	3.5	2.5	4.5	7.5	20.5
63	1.5	3.5	1.5	6	6	18.5
111	1.5	4	2.5	7	6	21
69	3	5	3	7	7	25
137	2	4	2	5	6	19
79	2	6	2	9	6	25
71	2	3	2	4.5	3	14.5
88	2	5	3	8	7	25
64	1	2	1	6	4.5	14.5
108	1.5	4	2	5	4	16.5
66	1	4	1	4	8	18
Mean ± SD	1.82 ± .61	4.14 ± 1.15	2.18 ± .70	6.2 ± 1.45	5.78 ± 1.49	20.14 ± 3.65
Percent Achieving Standard	57% (Standard ≥ 2)	64% (Standard ≥ 4)	79% (Standard ≥ 2)	64% (Standard ≥ 6)	64% (Standard ≥ 6)	43% (Standard ≥ 21)

Table 10
Undergraduate Research Symposium
Friday, March 18, 2005

Mean Scores for all Participants
Poster Competition

Rate each of the following items on a 1-5 scale...
"1" being low, and "5" being high

RESEARCH	SCORE	POSTER DISPLAY	SCORE
Abstract A brief summary of the main project. Must include a statement of the problem, materials and methods, results and conclusion.	3.8	**Text** Legible, easy to read.	4.2
Introduction A brief look at the background and goals of the investigation.	4.0	**Neatness**	4.5
Statement of Problem/Hypothesis Why is the project important and what is the main question to be answered?	3.9	**Accurately, yet concisely, summarizes student work**	4.2
Procedures A step-by-step description of how the project was done.	4.0	**Sections properly labeled**	4.3
Data/results Data tables and summaries of data used to draw conclusions.	3.8	**Correct spelling and grammar**	4.8
References	3.5	**Spacing of poster – Appropriate use of space, organization**	4.1
Conclusions	4.0	**Verbal defense of project** Ability to answer questions from judges/audience.	4.2
Total score	**27**	**Total score**	**30.3**

Table 11
Undergraduate Research Symposium
Friday, March 18, 2005

Summary for all Participants (N = 30)
Poster Competition

Research	Percent ≥ 3	Percent ≥ 4	Poster Display	Percent ≥ 3	Percent ≥ 4
Abstract	93%	63%	Text	100%	80%
Introduction	93%	70%	Neatness	97%	93%
Statement of Problem/Hypothesis	97%	60%	Accurately, yet concisely, summarizes student work	100%	73%
Procedures	93%	67%	Sections Properly Labeled	100%	87%
Data/Results	93%	53%	Correct Spelling & Grammar	100%	97%
References	73%	43%	Spacing of Poster	100%	93%
Conclusions	97%	60%	Verbal Defense of Project	97%	73%

Each category was scored on a 1 = low to 5 = high rating

Table 12
Undergraduate Research Symposium
Friday, March 18, 2005

Mean Scores for All Participants
Oral Competition

Rate each of the following items on a 1-5 scale...
"1" being low, and "5" being high

RESEARCH	SCORE	PRESENTATION	SCORE
Introduction A brief look at the background and goals of the investigation.	4.1	**Visual aids** Slides legible, easy to read. Appropriate graphics.	4.0
Statement of Problem/Hypothesis Why is the project important and what is the main question to be answered?	3.9	**Accurately, yet concisely, summarizes student work**	4.1
Procedures A step-by-step description of how the project was done.	3.9	**Sections properly labeled**	4.3
Data/results Data tables and summaries of data used to draw conclusions.	3.8	**Tone of voice/posture** Speaker presents loudly and clearly. Faces the entire audience.	4.0
Discussion/conclusion A brief summary of the main project.	3.9	**Correct spelling and grammar**	4.5
Future directions	3.6	**Verbal defense of project.** Ability to answer questions posed by judges/audience.	4.2
Total score	23.2	Total score	25.1

Table 13
Undergraduate Research Symposium
Friday, March 18, 2005

Summary for all Participants (N = 20)
Oral Competition

Research	Percent ≥ 3	Percent ≥ 4	Presentation	Percent ≥ 3	Percent ≥ 4
Introduction	100%	70%	Visual Aids	90%	55%
Statement of the Problem/Hypothesis	95%	60%	Accurately, yet concisely, summarizes student work	100%	70%
Procedures	95%	60%	Sections Properly Labeled	100%	85%
Data/Results	90%	60%	Tone of Voice, Posture	100%	60%
Discussion/Conclusion	100%	60%	Correct Spelling and Grammar	100%	85%
Future Directions	95%	40%	Verbal Defense of Project	100%	65%

Each category was scored on a 1 = low to 5 = high rating

Table 14
Theatre 425 Data Summary
Percent of Students Achieving Each Score

Item #	Score = 5	Score = 4	Score = 3	Score = 2	Score = 1	Score$\geq$ 3	Score $\geq$ 4
Item 1	33%	30%	19%	15%	4%	81%	63%
Item 2	48%	15%	11%	15%	11%	74%	63%
Item 3	19%	30%	26%	19%	7%	75%	49%
Item 4	26%	41%	7%	11%	15%	74%	67%
Item 5	30%	33%	30%	4%	4%	93%	63%
Item 6	52%	22%	11%	11%	4%	85%	74%
Item 7	30%	33%	11%	4%	22%	74%	63%
Item 8	26%	30%	19%	22%	4%	75%	56%
Item 9	44%	15%	7%	22%	11%	66%	59%
Item 10	22%	37%	19%	19%	4%	78%	59%
Item 11	22%	26%	33%	11%	7%	81%	48%

Responses from N = 27 Students. Percentages may not add to 100% due to rounding.

Table 15
Means and Standard Deviations for
Presentations and Research Papers
ENS 314

Group	Rater 1	Rater 2	Rater 3	Mean
TA1				
Presentation	2.6	2.6	2.6	2.6
Poster	2.6	2.8	2.5	2.6
Overall score				2.6 ± 1.0
TA2				
Presentation	4.0	4.1	4.1	4.0
Poster	3.4	4.1	3.8	3.8
Overall score				$3.6 \pm .8$
Combined				
Presentation	3.1	3.2	3.2	3.1
Poster	2.9	3.3	3.0	3.0
Overall score				3.1 ± 1.1

Table 16
Psychology 499
Spring 2005

Student	A1	A2	A3	B4	B5	B6	B7	C8	C9	C10	C11
A	3	3	2	N/A	N/A	N/A	2	2	5	3	2
B	5	5	5	N/A	5	5	5	4	5	5	5
C	4	5	5	N/A	5	4	5	5	5	4	4
D	4	4	4	N/A	4	N/A	4	5	5	4	4
E	4	5	5	N/A	4	N/A	5	5	5	5	4
F	4	4	4	N/A	4	N/A	5	5	5	5	5
G	3	3	N/A	N/A	5	5	3	5	5	4	3
H	4	5	5	N/A	5	5	4	5	5	5	5
Mean	3.9	4.3	4.3		4.6	4.8	4.1	4.5	5.0	4.4	4.0
SD	0.6	0.9	1.1		0.5	0.5	1.1	1.1	0.0	0.7	1.1

Table 17
Civil Engineering 495 Summary Data

Item #	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Mean	SD
1	5	5	3	5	5	5	5	5	5	4.8	.67
2	5	5	5	5	5	5	5	5	5	5.0	.00
3	5	5	4	5	5	5	5	5	5	4.9	.33
4	5	5	5	5	5	5	5	5	5	5.0	.00
5	10	9	9	9	10	10	8	9	10	9.3	.71
6	5	5	5	5	5	5	5	5	5	5.0	.00
7	5	5	3	4	5	5	5	5	5	4.7	.71
8	5	5	5	5	5	5	3	5	5	4.8	.67
9	3	4	4	4	3	5	5	5	4	4.1	.78
10	5	5	4	5	5	5	5	5	5	4.9	.33
11	5	5	4	5	5	5	5	5	5	4.9	.33
12	5	5	5	5	5	5	5	5	5	5.0	.00
13	4	4	5	4	5	5	5	5	5	4.7	.50
14	4	3	5	5	5	5	4	5	5	4.6	.73

Appendix B

Response to Capacity and Preparatory Review Site Visit

This appendix describes the progress the university has made in addressing the issues raised by the WASC Visiting Team's report as well as the WASC Commission letter. Taken together, these two documents list four areas for which we should report our progress: (1) Mission and Strategic Planning; (2) Assessment; (3) the Imperial Valley campus; and (4) Continuing analysis of the balance among access, recruitment, and retention.

Mission and Strategic Planning

Mission. The visiting team recommended that the *"university should make certain that it meets its traditional mission [commitment to undergraduate teaching] and that it should communicate this commitment regularly to university and area communities."* We would like to clarify our traditional mission and describe the many ways we meet our mission.

The traditional mission of the California State University system, including San Diego State University, is to offer programs that emphasize quality of instruction and lead to undergraduate and graduate degrees, including the doctoral degree. This mission is also accomplished by providing an environment in which research, scholarship, and creative activity is valued and supported. In fall 2004 our campus enrollment consisted of 26,204 undergraduate students and 5,839 graduate students. Thus, our energies have long been directed toward ensuring that both undergraduate and graduate students receive a quality educational experience.

The Capacity and Preparatory Review described in great detail our progress in implementing policies and procedures that lead to improved retention and graduation rates of our undergraduates and an increased emphasis on student learning. We detailed the numerous opportunities that students have to study abroad, experiences that enrich their education, their lives, and their ability to be successful in an increasingly global and inter dependent world. We also described the opportunities for undergraduate engagement in research, scholarship, and creative activity, believing that contact with graduate students and faculty in these experiences increases student engagement and student learning. Finally, we described our quality assurance procedures, including periodic Academic Reviews and annual Academic Plans. Both procedures require departments/programs to document the quality of their undergraduate and graduate programs.

The Educational Effectiveness Report continues our discussion of ways to improve the effectiveness of undergraduate student learning and success. Thus, we believe we have met and continue to meet our traditional mission. The mission is communicated in multiple ways including the SDSU website, the master plan, and the impending capital campaign, which has at its foundation a commitment to excellence in undergraduate and graduate education.

Strategic Planning. San Diego State University appreciates the Commission's acknowledging the progress that has been made with centralized planning, donor support, and its acknowledgement of how those and other activities have enabled the university to come through a time of severe budget cuts without weakening its commitment to our mission.

We have continued to make progress in efforts to extend and integrate planning into the fabric of our institution and these efforts have played out in important and significant ways. Our response to the recommendations forwarded by the Commission will describe our planning efforts as related to undergraduate and graduate education and the upcoming capital campaign. These descriptions also illustrate the broad involvement of the deans and other university leaders, the University Senate, and other constituents. We will address (1) academic planning, (2) capital campaign planning, (3) the integration between them, and (4) planning related to rebuilding the faculty.

Academic Planning. Our academic planning efforts have been aimed at supporting both undergraduate and graduate education, and identifying key priorities that determine faculty recruitment and hiring. The academic planning process has at its core a set of academic plans the Provost requests from each of the colleges annually. In her request to the colleges, the Provost outlines key strategic areas for the university—such as internationalization of the university and student learning outcomes and assessment—and also invites departments and colleges to identify key areas of strength they wish to pursue and support. As part of their evaluation and progress reports, departments identify the faculty hires linked to strategic priorities at both university and department levels.[6] In a critical part of this process, Deans receive plans from departments and, based on their attention to university and college priorities, submit their own college plans and hiring priorities directly to the Provost. The Provost, in discussion with the Deans, then determines the allocation of new faculty positions. Consequently, this process identifies key directions for the university and also allows departments to build from their areas of strength.

Two other areas of academic planning, which are the focus of our self-study and are outlined in detail in Essay 1, deserve attention here as well because they illustrate the extent of our planning activities. As noted in the Capacity and Preparatory Review, San Diego State University became an impacted campus in 1999. As it did so, it reaffirmed its commitment to a diverse student body. The University Senate adopted Principles to Guide Impaction and Enrollment Management Practices in 1997. Since that time, it has worked in conjunction with Academic Affairs to review carefully the data on student enrollment to determine if appropriate levels of diversity are being maintained amongst our students [e.g., See 2005 Enrollment Management Report]. This ongoing discussion has led to greater understanding on campus of how enrollment works and has also revealed that while there may be small fluctuations in relation to minority enrollment, the overall trend has been relatively consistent. There has been another very significant outcome to this process. The University Senate has charged its Academic Planning and Policy Committee (AP&P) to extend the annual enrollment management report to

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[6] The College of Arts and Letters also has a faculty committee that provides input to their Dean.

examine not only data related to admitted and matriculating students, but to also consider retention and graduation rates. Additionally, AP&P will now study the result of impaction on continuing students in terms of time to degree, rate of completion, and ethnicity.

A third area of planning is related to ensuring that undergraduate students graduate in a timely manner from San Diego State University. To this end, Academic Affairs has moved to centralize processes, procedures, and requirements to ensure that students take appropriate classes when they need to, that seats in classes are available, and that they receive timely, accurate information about the requirements in their programs. The result of this planning has led to:

- consistent messages to incoming students about the need to take 15 units per semester to complete 120 units for graduation in four years;
- identifying four key courses —oral communication, written communication, critical thinking, and mathematics — that all incoming freshmen need to take in the first two semesters;
- the development of four-year Road Maps for all SDSU majors and emphases; and
- using enrollment dollars to fund seats on an as needed basis to ensure that students are not closed out of required courses.

The result of these changes, instituted over the past several years, has been a steady and strong increase in the one-year continuation rates of first-time freshmen, from 74.5% in 1999 to 82.6% in 2003.

We still have concerns regarding our graduation rates, however, and we have put processes into place that will centralize and focus our efforts over the next several years. For example, in March 2005 the Undergraduate Council recommended to the Senate, which the President later approved, a change to the University Policy File that changes the membership and charge of the Council to establish the Graduation and Retention Subcommittee as a permanent subcommittee of the Undergraduate Council. The subcommittee's charge is to oversee a systematic approach to the retention and timely graduation of undergraduates.

Capital Campaign Planning. As noted above, the academic planning process is a clearly defined mechanism for setting and determining priorities for faculty hires. As we have begun to consider engaging in San Diego State University's first ever comprehensive capital campaign, our academic planning process has informed and become a key part of the campaign planning process. This process has involved planning at the institutional level and at the unit level. The President convened the Campaign Planning Committee at a two-day retreat to identify broad areas of focus for the university, identify and describe the infrastructure necessary to engage in a successful campaign, and to discuss the role of the Campaign Planning Committee in leading a successful campaign.

Based on academic plans that had been submitted over the past eight years, the Provost asked the Deans to develop strategic areas of focus for Academic Affairs. What emerged

from these discussions was first and foremost an overarching commitment to high quality undergraduate and graduate education. Additionally, the Deans identified and agreed upon three areas of focus: (1) research, scholarship and creative activities; (2) community engagement; and (3) internationalization of programs. [See Capital Campaign Priority Cover Sheet]

As we have shifted into campaign-planning mode, these commitments have become the rubric by which we have sought to identify campaign priorities for Academic Affairs. When the Provost issued her annual call for academic plans in 2005, she appended a series of questions (based on these commitments) and invited departments and programs to submit possible campaign priority proposals [See Provost's memo]. Approximately 90 proposals were submitted.

These proposals were vetted first by the Academic Deans Council/Development Coordinating Committee.[7] They were then rated and reviewed by the entire Dean's Council. Based on this review, key initiatives and priorities were identified as key to Academic Affairs and were presented to the Campaign Planning Committee at a retreat in April 2005. Student Affairs, Athletics, and KPBS, our public broadcasting station, presented their priorities as well.

Subsequent to the retreat in April, University Development brought in an outside consultant to assist our priority development process as it proceeds. The Academic Deans Council/Development Coordinating Committee continues to meet on a monthly basis to ensure that there is thoughtful coordination between academic affairs and those responsible for campaign planning.

Integration: Campaign Planning and Academic Planning. Although final priorities for the capital campaign have not been established, the coordination between Academic Affairs, Student Affairs, and these priorities will have taken shape and been informed by ongoing dialogue. This has already occurred in the area of scholarships.

Several years ago, a group of deans working in conjunction with the Office of Financial Aid and Scholarships identified several problems related to scholarships. Foremost among these were (1) lack of clear guidelines, processes, and sets of responsibilities for all involved with scholarships, (2) lack of any university-wide strategy for approaching scholarships, and (3) relatively low amounts of scholarship dollars awarded annually by the university. Since these issues were university-wide and involved individuals from a number of units, an ad hoc committee—comprised of individuals from Academic Affairs, Student Affairs, and University Advancement—was formed to explore these issues and make recommendations.

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[7] The co-chairs of the committee are Dean Skip Meno and Kim Hill from University Advancement. Other members include Dean Geoffrey Chase, Dean Paul Wong, Dean Gail Naughton, and Dean Joyce Gattas. Other representatives from University Advancement include Allan Bailey and Kathy Drucquer Duff. This committee oversees the alignment of Academic Affairs and University Advancement priorities and coordinates the establishment of procedures and the accomplishment of goals.

The ad hoc scholarship committee developed a proposal that involved a clear strategy for raising scholarship dollars to support outstanding students, students with significant financial need, international study opportunities, and support for current students pursuing undergraduate research, scholarship, or creative activity. Additionally, the proposal called for the creation of a new, university scholarship office that would have as its primary charge raising funds and coordinating university-wide scholarship activities across the campus. Thus, the proposal called for the appointment of a Director for Development for University Scholarships, a Director for University Scholarships, administrative support personnel and funds to be designated for collaterals. The proposal was submitted to the Cabinet Budget Committee, which, given budget constraints at the time, funded only an Assistant Director for Development for University Scholarships.

As these conversations developed, and as the proposal to address scholarships from a university-wide perspective took shape, it became clear to the ad hoc committee that a focus on scholarships would eventually become a focus of a capital campaign. At the same time, it also became evident that if scholarships were to become a campaign focus, certain infrastructure elements needed to be put in place to ensure that we could move forward strategically and effectively with donors, representatives from student affairs and the colleges, and with students.

This led President Weber to charge the Provost and the Vice President for Student Affairs with developing a proposal to address these infrastructure needs. The proposal they submitted jointly, which called for funding to support positions in both academic affairs and student affairs, was accepted and has been acted on, creating permanent positions in the Office of Financial Aid and Scholarships, an office of Academic Scholarships reporting to Undergraduate Studies, and a permanent scholarship coordinating committee that reports directly to the President.

Rebuilding the Faculty Ranks and University Priorities. It would be fair to say that "rebuilding the faculty" is a campus wide priority in and of itself. Between 2002-03 and 2004-05 the number of tenure-line faculty declined from 831 to 725 (not counting faculty in the Faculty Early Retirement Program). This has resulted in difficulties across almost all departments in meeting the curricular needs of their programs and attending to other university priorities. The beginning of a budget turnaround in the 2004-05 academic year allowed us to conduct approximately 80 searches resulting in close to 60 new hires. The Provost has authorized nearly 100 searches for 2005-06. Assuming a slowdown in the number of retirements (which faculty demographics predict), these numbers will make a material difference in restoring the vital human resources required to run our programs, meet student needs, and attend to shared governance.

Even as we rebuild faculty numbers, however, we do so with due attention to overall campus priorities. Those faculty requests most clearly aligned with our three academic goals of research, internationalization, and community engagement are most likely to be authorized. Departments are expected to demonstrate not only that they have student learning assessment plans, but that they are building and changing their programs

according to evidence of student learning outcomes.[8] Rebuilding the faculty is also part of our capital campaign efforts, as can be seen in the priority given to endowed professorships in many of the same areas targeted for new positions. Indeed, the alignment of faculty hiring and campaign priorities can be seen in the fact that we have made a commitment to assigning a state-funded line to each endowed professorship.

Finally, the university is also addressing some of the thornier difficulties associated with faculty recruitment and retention. Housing has been a major impediment to success recently, so the Master Plan, which will be presented to the Board of Trustees in September 2005, includes a proposal for a faculty and graduate student housing development. Diversity is also a major concern. While the university has been successful in attracting and retaining Hispanic and Asian faculty, it has been less so with African Americans. Therefore, the Provost and Senate commissioned a study on the recruitment and retention of African American faculty, which was completed in May and will provide the campus with additional strategies for future searches.

Assessment

Progress in the Majors. Essay 2 (*Student Learning Outcomes Assessment: How Well Are We Doing?*) and Essay 3 (*The Impact of Participation in Research, Scholarship, and Creative Activity on Undergraduate Student Learning*) detail our continued progress in examining student learning. As described in Essay 2, AY 2004-05 was our first year of asking departments/programs to write an annual progress report on student learning. Our findings indicate that about 30% of responding programs are using direct measures, 30% are using indirect measures, 26% are using a combination of indirect and direct measures of student learning, and 13% have not implemented their assessment programs. We also note the continued challenges that some departments/programs face with fully understanding how to use the results of their assessment projects for program improvement. Essay 2 also highlights the college-wide efforts taking place in the College of Business Administration and the College of Education, the latter college having a very clear vision of the steps needed to fully implement student learning at the program level. The case studies presented in both Essay 2 and Essay 3 serve as additional examples of our progress and provide insights into how we can further a culture of inquiry, assessment, and continuous improvement. As described in both Essay 2 and Essay 3, challenges to more complete implementation of student learning assessment are related to uncertainty on the part of many faculty members about how to fully implement the assessment process at the program level and an underdeveloped infrastructure for supporting these activities. In these essays we suggest that a personal, bottom-up strategy combined with top-down vision and directives can assist us in achieving a more comprehensive implementation of student learning assessment. [Please see Essay 2 and Essay 3 for more detail.]

Progress in the General Education Program. Our progress in student learning assessment in the General Education program is described in Essay 2 where we discuss initial results for a section of 15 items from *The College Student Report*, several of which (e.g., "writing clearly and effectively"; "speaking clearly and effectively"; "thinking

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[8] This year the Provost denied requests for faculty lines if departments had not submitted assessment plans.

critically and analytically"; "analyzing quantitative problems") are similar to the learning outcomes specified for our General Education program. Our findings indicate that SDSU seniors had significantly lower mean scores than their doctoral intensive peers on three of the four previously listed items. These findings, however, must be tempered by the fact that we have no way of knowing whether seniors were referring to GE courses or courses in their major when they responded to these items. Given this caveat, we suggest a design for carrying out a local assessment project that would clearly align the statements to our GE learning outcomes, ask students specifically to respond as a result of GE course work, and randomly select students from a number of GE courses. Most importantly, faculty teaching the selected courses would need to come together to discuss the results of the project and suggest ways to improve the GE program.

While the project described in the previous paragraph would give us indirect evidence of student learning in the GE program, we know that these data must be supplemented with direct measures in which student work is examined from a program perspective. A $3.6 million grant from Qualcomm (Information, Communication, and Technology [ICT]) affords us an opportunity to transform the GE program by providing opportunities for all students to graduate with ICT literacy skills. Our goal is to develop curriculum architecture with coherent and measurable learning objectives across the GE program. We have already begun this project by bringing in speakers (e.g., John Seely Brown during spring 2005) to initiate conversations about how "growing up digital" impacts learning and — consequently — pedagogy. A four-day workshop was held in late May 2005 for 20 faculty members to provide hands-on opportunities to use various technologies and stimulate thinking about how and whether these technologies might positively influence student learning in their disciplines. Most first-time freshmen (N = 4,111 for fall 2004) must take Rhetoric and Writing and Communication GE courses during the first two semesters; thus, the majority of participants are faculty members from these two departments. This conscious choice was made to begin a scaffolding process that will assist students in building upon the knowledge and skills acquired in earlier GE courses when they enroll in later courses.

The first cohort of faculty are meeting this summer in groups and for one-on-one sessions to discuss possible alignment of student learning outcomes and strategies for reinforcing these outcomes across the disciplines. The grant allows us to provide faculty with the kinds of support our self-study indicates are essential for institutional change. These strategies including bringing "outside experts" to campus, providing one-on-one mentoring for the design and development of appropriate assessment measures, giving faculty stipends upon completion of a "deliverable," publicly sharing the results of completed assessment projects to the campus community in December 2005, and engaging faculty in discussions about the implications of their findings and how these results inform changes in the GE program. We are also adopting a "train the trainer" model so that early cohorts of faculty can become mentors to later faculty cohorts as we continue to infuse ICT knowledge and skills in additional GE courses. We believe this project will enable us to influence student learning on a large scale and serve as a model for institutional change, particularly with the paradigm shift necessary to sustain a focus on student learning at the program level.

Short- and Long-Term Revision of the Writing Proficiency Assessment. In the last several years, the University has made significant strides with Upper Division Writing Proficiency. We have combined the Upper Division Writing Exam and the Transfer Writing Assessment into one test, the Writing Proficiency Assessment (WPA). This step has simplified the requirements and has eliminated the perceived inequity toward transfer students. In addition, new procedures are in place —including the new mandate that the test be taken in the junior year and the newly imposed compulsory registration into RWS 280/281 for those students who require additional writing instruction before enrolling in a "W" course —that will compel students to complete their Graduation Writing Assessment Requirement (GWAR) in a timely manner, thus eliminating roadblocks to graduation that have been a significant problem for many students through the years. Through departmental study and the ongoing university reaccreditation process prescribed by WASC (specifically the Report of the WASC Visiting Team Capacity and Preparatory Review), however, it is becoming increasingly clear that although testing and placement concerning upper division writing on campus have improved, there is still considerable work to be done in this area.

The first step, we believe, is to refashion the exam so that it more accurately assesses the writing-related skills essential to General Education and required for successful upper division writing. The current instrument is statistically reliable, and it seems to do a good job of placing students in the appropriate writing courses. A study by the Director of the Office of Testing, Assessment, and Research indicated that faculty members teaching writing courses believe that 80% of students are being placed in the appropriate course. The ultimate validity of the exam, however, is uncertain because the elements of rhetoric and composition it directly measures are more akin to basic than advanced writing. Therefore, a task force has been working to modify the exam so that it more directly reflects the kinds of skills and practices related to upper division courses such as sophisticated reading, critical thinking and analysis, and revising prose. The initial revisions will provide some headway by focusing the exam more specifically on reading, analyzing, and writing about argumentation. We plan to send students an email, through the Web Portal, notifying them about the changes to the WPA in August and September. The revised assessment will be implemented in spring 2006.

How to effect additional improvement of the exam is less clear at this point, particularly since there is still much uncertainty about standards and criteria. For example, there is currently no consensus about General Education's role in developing writing, nor is there a definitive sense of what skills and practices actually comprise upper division writing proficiency. In order to understand what constitutes proficiency and how best to assess it, careful research lies ahead. We hypothesize that, in the long run, upper division writing skills and practices may be most effectively developed —and assessed —at San Diego State University through rigorous, discipline-specific, upper division writing courses, and thus we will carefully consider a plan to de-emphasize high-stakes testing in favor of a broad array of "W" courses across the disciplines.

Campus-Wide GWAR Coordinator. For many years, the kind of work described under "Short- and Long-Term Revision of the Writing Proficiency Assessment," above, has been more or less coordinated by the Chair of the Department of Rhetoric and

Writing Studies (DRWS), with the help of various constituents and stakeholders, including the Dean of Undergraduate Studies, the Director of the Office of Testing, Assessment, and Research, Academic Affairs, and, of course, the faculty of DRWS. The work has been managed satisfactorily, but in order to implement the best possible approach to upper division writing proficiency, the university recognizes the need for a campus-wide GWAR Coordinator. This position, which is commonplace throughout the CSU, will provide the leadership needed to further refine the WPA and perhaps replace it with a series of upper division writing courses that truly develop the skills we believe are most essential for our graduates to possess.

CSU Systemwide Evaluation of Teacher Preparation. The College of Education, in cooperation with the Office of the Chancellor and with all CSU campuses who offer teacher preparation programs, participates in an annual evaluation of those programs, drawing not only on feedback from graduates, but also on assessment of graduate readiness and performance by their K-12 supervisors. While we recognize that the CSU Systemwide Evaluation of Teacher Preparation is not representative of San Diego State University, we believe it provides insight into the extent and sophistication of some of the assessment activity that is now occurring at SDSU, as well as the use of assessment data for program improvement.

At the request of the Deans of the CSU Schools of Education, the Teacher Education, Evaluation and Assurance department in the Chancellor's Office initiated development of a survey of teacher preparation program graduates completing their first year of employment as teachers in elementary and secondary schools. Rather than gathering data from program graduates alone, the survey methodology included collecting information from each respondent's K-12 supervisor, typically their principal. Thus for those survey items pertaining to the teaching practices of CSU program graduates, the data set includes not only the perceptions of the graduates themselves (indirect evidence) but also the judgments (direct evidence) of their supervisors as to the quality of the novice teachers' practices. Pilot implementation of the survey was conducted on the graduate cohort of 1999-2000 during 2001, with the first survey administration sampling graduates of all CSU programs taking place in 2002, providing data on the 2000-01 and 2001-02 CSU cohorts. The survey is now administered annually, allowing each campus, college and program to monitor changes in their performance over time. To date, the evaluation findings reflect the experiences of over 40,000 CSU graduates.

Aggregated results for the CSU system as a whole are reported in public documents; confidential results for each individual campus and credential program are distributed to the deans. Customized reports can be requested by individual campuses. Each campus considers its results in planning for improvements in its credential programs. The following statement from the Director of the School of Teacher Education (STE) exemplifies the use of survey results for program planning at SDSU:

> The Director of the School of Teacher Education analyzed results of the CSU system wide survey and developed an overview of findings in 2004. The analysis was presented to STE faculty, and several actions resulted. The Director participated actively on the CSU's Single Subject Task Force,

which was a direct response to the CSU survey's finding that Single Subject candidates did not feel adequately prepared to teach reading comprehension and vocabulary to secondary students. STE faculty who teach the secondary reading course attended workshops that were offered by the Task Force and received materials to support faculty in the teaching of that course. The goal was to ensure that key principles were taught consistently in every secondary reading course.

Another area in which candidates reported that they felt insufficiently prepared was assessment of K-12 students. As a result, methods faculty met to discuss, and subsequently implemented, new ways of ensuring that credential candidates were able to effectively assess their students' learning.

STE faculty also reviewed the teaching of social studies methods courses, a content which candidates reported feeling insufficiently prepared to teach. New faculty members were assigned, in some cases, to those courses. The Director also met with appropriate faculty members to review syllabi and discuss how to ensure that the methods courses provide the learning necessary for candidates to feel adequately prepared to teach social studies to their students.

Finally, because the CSU survey found that fieldwork was a critical component of the credential program for candidates, the department has thoroughly reviewed its supervision training processes and made changes in workshops to support supervisors as they mentor and guide student teachers in their field experiences. Also related to fieldwork, the Director has worked with the Early Field Experience Coordinator to revise the Early Field Experience guide to ensure a comprehensive, guided experience for prospective teacher candidates.

Imperial Valley Campus

At the heart of the issues raised by the WASC report is the difference between SDSU-Imperial Valley (SDSU-IV) and SDSU-San Diego (SDSU-SD). SDSU-SD is a large complex urban university while SDSU-IV is a small and primarily rural university with focused offerings. SDSU-IV has fewer than 1000 students with a student population that is primarily Hispanic, primarily first generation college-bound, primarily low income, and that requires more faculty attention. Economies of scale are not possible so teaching responsibilities of faculty at SDSU-IV are typically three or four courses per semester, each with a distinct preparation. Service demands on faculty are higher and resources for faculty scholarship are minimal, consisting primarily of good library access through connections with SDSU-San Diego's library. These differences may have led to the suggestion by the WASC visiting team that we consider writing a separate Educational Effectiveness essay for SDSU- IV. However, we decided not to pursue this avenue due to the limited time, faculty resources, and the amount of planning and effort that have gone into developing the Freshman Scholars Program. We instead use these sections to

address our progress in the areas of concern noted by the WASC visiting team and the WASC commission letter.

SDSU-IV Reappointment, Tenure and Promotion Issues. SDSU-IV faculty seeking promotion and tenure are held to requirements for scholarship that are largely determined by the policies in their department on the SDSU-SD campus. There is a caveat in the SDSU Policy File,

'In applying department or school criteria and standards for personnel actions, units shall weigh accordingly the distinctive requirements of IVC assignments, even as they consider varying obligations and accomplishments among their faculty assigned to the San Diego Campus'. (Faculty, Imperial Valley Campus, 1.1., P. 63)

Probationary faculty on the SDSU-IV campus are concerned that SDSU-SD departments may not fully attend to the competing demands on their time and that the expectations for scholarship may be too high given the other responsibilities at SDSU-IV.

SDSU-IV is exploring proposals that may significantly mitigate this situation. The proposals focus on providing more specific guidance than the current policy file language above provides. Given the many ramifications to any changes in RTP processes, changes will require extensive discussion before implementation. However, the SDSU-IV faculty will move deliberately toward a reasonable resolution of the underlying problems and hope to have something in place during the coming year.

SDSU-IV Faculty Workload Issues. Beginning this fall, resources are being allocated to ensure that all probationary faculty will have no more than three courses per semester (and only two courses per semester for the first year), a change that will be permanent. This instructional workload will also be extended to all associate and full professors who are actively engaged in a program of scholarship, but may be subject to budget limitations.

SDSU-IV Staffing Issues for Faculty and Support Staff. Of continuing concern is the "thinness" of faculty and staff (particularly at a time when enrollment is growing and the Freshman Scholars Program has been added). The small size requires that faculty and staff "wear many hats;" moreover we have too few faculty on the SDSU-IV campus in some disciplines to provide an adequate range of expertise in the curriculum. In addition, many committees require that SDSU-IV faculty and staff travel to San Diego for meetings; in effect taking a whole day to attend what is sometimes a one-hour meeting. This loss of time can be alleviated in part by better use of videoconferencing capabilities.

Too few faculty in certain disciplines is an ongoing problem, but in the short term the SDSU-IV campus is seeking to add additional faculty to current programs rather than add new faculty in new programs. For the coming year, searches will be conducted in mathematics, Spanish, psychology, criminal justice, management, literacy, and teacher education with the stipulation that no more than a total of five faculty are hired. All of

these areas add faculty to existing programs, which will reduce the excessive dependence on part-time lecturers who staff the majority of courses on the IV campus.

The issue of adequate support staff has not been fully addressed. In fact, owing to budget stringencies, staff members who leave the IV campus are not being replaced. By reorganizing staff duties in Student Affairs, the campus can provide more effective student support, particularly for advising and recruiting, even with fewer staff members. For example, a concrete two-year plan of course offerings for the Freshman Scholars Program will enable students and advisors to develop definitive planning. A similar plan is in preparation for upper division majors. Greater use of the web and e-mail for advising will allow more effective use of time for both staff and students. This transition is more difficult to implement than it may seem because of the culture of the predominantly rural, Hispanic students who often feel more comfortable with face-to-face interactions. Growth in student enrollment will ultimately require additional staff members and will provide the long term resolution of the problem.

Planning for Student Growth. SDSU-IV is in the process of institutionalizing its Freshman Scholars Program. When the program becomes permanent, it is expected to grow to 50 students admitted per year. This enrollment growth is expected to generate resources sufficient to provide for program needs and perhaps subsidize nascent upper division programs that are needed in the Valley.

Long term growth of the SDSU-IV campus is assured by the rapid growth in the population of the Imperial Valley, by the diversifying economy which will require a more educated workforce, and by a recently implemented public school initiative that encourages and prepares students for university entrance. In the short term, the campus is experiencing a loss of students in the teacher preparation areas (Liberal Studies and the Credential Programs) at the same time it is adding freshmen and psychology upper division students. The SDSU-IV campus will be working with Academic Affairs and Student Affairs on the SDSU-SD campus to help with enrollment growth and changing enrollment foci.

Student Learning Outcomes Assessment. The degree programs at SDSU-IV have the same course descriptions and structure as the parallel programs on the SDSU-SD campus. Hence, the same outcomes and the same assessment processes and measures will be used at both campuses. For example, the Liberal Studies programs on the Imperial Valley Campus and the San Diego campus are working together to create a senior level assessment that will serve both programs in terms of student assessment and program assessment. This assessment builds on an analysis of the CSET exam results and portfolio data that were collected at both campuses in this last year.

The campus is now requesting assessment plans from the appropriate departments on the SDSU-SD campus and will be scheduling meetings with faculty from both campuses to ensure that annual student learning assessment reports are submitted and reviewed for both campuses. To date, this has occurred only for the Teacher Education program.

Balance Among Access, Recruitment, and Retention

Essay 1 describes our investigation of continuation and graduation rates for dual admit students and local transfer students. Our data indicate greater success in improving continuation rates than graduation rates and we posit several explanations for this including aligning programs, services, and resources with student needs, considering units to degree as a more useful indicator of student success, the need for examining data disaggregated by ethnicity for programs and subgroups of students, and tracking student patterns with newly available software. We also noted the differential success of retaining and graduating students when examined by ethnicity. [Please see Essay 1 for more detail.] Finally, because our one-year continuation rates are very high we discuss the need to routinely publish 2-, 3-, and 4-year continuation rates so that we can better determine why our graduation rates remain lower than desired.

One-year continuation rates and graduation rates disaggregated by ethnicity are available and published on the Office of Analytic Studies and Institutional Research website for first time freshmen and for all upper division transfer students. These data reveal similar patterns to our self-study findings. For first-time freshmen (FTF), one-year continuation rates have increased from 75.3% in the fall 2000 cohort to 82.6% in the fall 2003 cohort. One-year continuation rates for upper division transfer students have remained rather stable at about 85%. The data also indicate lower one-year continuation rates (for FTF) for African-American, Hispanic, and Asian/Pacific students, particularly for the fall 2000 and 2001 cohorts, with ethnic differences decreasing for the fall 2003 cohort. It will be important for us to examine fall 2004 rates to see if this trend continues or not.

Graduation rates for both FTF and upper division transfer students have increased over the past several years but are still far below acceptable values. In addition, the rates indicate differential success across ethnic groups. Thus, the trends described in Essay 1 are similar to the rates published on our website, indicating that the strategies and recommendations described in our self-study will likely apply to all student groups.

The university has initiated other strategies for improving retention and graduation rates of our students. One such program, "Bounce Back," is aimed at students who are on academic probation, which occurs when a student's GPA falls below a 2.0 average. This pilot program was introduced last year and funded by the Aztec Parents Annual Fund. The program is based on resiliency theory and positive psychology. Participants meet in one-hour seminars weekly for 14 weeks. Topics covered in the sessions include advising, developing time management and study skills, avoiding procrastination, and various other positive psychological aspects. Initial results indicated that students who participated in the program had a 70% retention rate compared to non-participants who had a 30% retention rate. Next steps include garnering additional resources to provide the "Bounce Back" program to a larger number of students on academic probation.

Additional progress is also underway in response to a system-wide initiative to improve graduation rates of all students. Two examples include contacting students who have 150 units or more and have not applied for graduation and students with 75 or more

units who are still in the premajor. These strategies should assist us in better directing our resources toward improving student success. For example, if students respond that they were not advised properly at either a community college or SDSU we can work for improvements in those areas. On the other hand, if low GPAs are the reason for these excess units, we can provide supplementary instruction, tutoring, or other services in courses with high failure rates. A number of the strategies and recommendations described in our self-study should also lead to increases in retention and graduation rates of all our students.

Concluding Remarks

San Diego State University is a large, complex university dedicated both to sustaining its comprehensive mission and to excellence in undergraduate and graduate teaching, scholarship, and service. Our size and complexity means that students can participate in a wide variety of academic and student life experiences, learn in an environment that offers diversity of people and ideas, and engage with faculty and the community in service-learning, internships, study abroad, and research and creative activities. The health of a university, in broad terms, rests on its ability to ensure that its students graduate with the knowledge, skills, and abilities necessary to be successful citizens.

Our essays in the Educational Effectiveness Report and the progress described in this appendix are indicative of the seriousness with which we engaged in the new WASC reaccreditation process. The sustained study and reflection we undertook leads us to recognize the excellent work that is taking place across campus by a dedicated cadre of faculty, staff, and administrators who care deeply about students. Our inquiry has also led us to better understand the challenges facing the University and to identify the steps we need to take to sustain the progress we have made.

Equally important to our examination of educational effectiveness, the process we engaged in during reaccreditation has changed the university. Our work represents this transition and our commitment to continue to engage in inquiry that leads to evidence-based decision making, and ultimately, to improvements in our educational effectiveness.

Inventory of Educational Effectiveness Indicators
Institutional Level

CATEGORY	Have formal learning outcomes been developed?	Where are these learning outcomes published? (Please specify)	Other than GPA, what measures/indicators are used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	Date of last program review for this degree program
University	SDSU Mission and Goals	General Catalog	Graduation Writing Assessment Requirement	1997
General Education	Yes	General Catalog Curriculum Guide		
Thomas B. Day Freshmen Success Programs	Yes	Located in Division of Undergraduate Studies Office	Direct Measures: Group Presentations, Reflective Essay, Journal	
Faculty/Student Mentoring Program	Yes	Located in Division of Undergraduate Studies Office	Direct Measures: Writing Assignments, Videotaped Performance, Quizzes	
Honors Program	Yes	Located in Division of Undergraduate Studies Office	Direct Measures: Pre/post essay, Writing Assignments, Senior Thesis	
Liberal Studies	Yes	Located in Division of Undergraduate Studies Office	Direct Measures: Portfolio Review, Capstone Essays, Writing Proficiency Assessment, CSET scores	Fall 2001

Inventory of Educational Effectiveness Indicators
Undergraduate and Graduate Departments/Programs

Academic Unit	Have formal learning outcomes been developed?	Where are these learning outcomes published? (Please specify)	Other than GPA, what measures/indicators are used to determine that graduates have achieved the stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	Date of last program review for this degree program
College of Arts and Letters				
Africana Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Pre/post Test, Senior Thesis, Writing Assignments, Oral Presentations, Group Projects Indirect Measures: Exit Survey, Alumni Survey	Spring 1994
American Indian Studies	Yes	Located in Department & Division of Undergraduate Studies	Indirect Measures: Student Survey	Spring 2004
Anthropology	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Pre/post Test, Research Paper Indirect measures: Exit Survey, Alumni follow up	Spring 2000
Asia Pacific Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Essays, Term Papers Indirect Measures: Employer surveys	Spring 1990
Chicana & Chicano Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Term Papers, Portfolios Indirect Measures: Student Evals.	Spring 2000

Field	Goals	Location	Measures	Date
Classics & Humanities	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Senior Seminar, Portfolio Review Indirect Measures: Faculty & Student Surveys	Fall 2000
Economics	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Pre/post Exam, Computer Skill Performance, Internship Indirect Measures: Graduating Senior Survey	Spring 1996
English & Comparative Lit	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Work Indirect Measures: Faculty & Student Surveys	Spring 2002
European Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: ACTFL Tests for Language Proficiency, Embedded Questions, Scoring Rubrics Indirect Measures: Exit Survey, Focus Groups	Fall 2001
Geography	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Capstone Course Indirect Measures: Student Surveys	Fall 2002
History	No, Goals in Place		Direct Measures: Written Work	Fall 1998
Latin American Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Term Papers, Essay Questions, Language Proficiency Test, Comprehensive Exam Indirect Measures: Syllabus Review	Fall 1991
Linguistics & Oriental Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Language Proficiency Tests, Written assignments Indirect Measures: Exit Interview, Student, Alumni, & Employer Survey	Spring 1997

Department		Located in	Measures	Date
Philosophy	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Research Papers, Oral Exams, Portfolio Review	Fall 1998
Political Science	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Standardized Exam, Capstone Course, Embedded Questions in Exams Indirect Measures: Senior Survey, Alumni Survey, Focus Groups	Fall 2000
Religious Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written work, Capstone Seminar, Embedded Questions, Portfolio Review Indirect Measures: Exit Interview	Spring 1999
Rhetoric & Writing	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Work	
Sociology	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Assignments, Screening Exam, Embedded Questions,	Spring 1996
Spanish & Port. Languages	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Term Papers Indirect Measures: Focus Groups, Survey of Graduates	Spring 1998
Women's Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Embedded Questions Indirect Measures: Student Survey	Spring 2000
College of Business Admin.				
Accountancy	Yes	Located in Department & Division of Undergraduate	Direct Measures: Written Assignments, Graduation Writing Assessment	Spring 2000, Accreditation:

Department		Location	Measures	Date
Studies			Requirement, Capstone Course, CSU Business Assessment Test, Case Study Analysis, Common Exam Questions, Risk Assessment Case	Spring 2003
Finance	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Assignments, Graduation Writing Assessment Requirement, Capstone Course, CSU Business Assessment Test, Case Study Analysis Indirect Measures: Senior Survey	Fall 1998, Accreditation: Spring 2003
Information & Decision Systems	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Assignments, Graduation Writing Assessment Requirement, Capstone Course, CSU Business Assessment Test, Case Study Analysis Indirect Measures: Senior Survey, Alumni Survey	Fall 2000, Accreditation: Spring 2003
International Business	No		Indirect Measures: Surveys	Spring 1996
Management	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Assignments, Graduation Writing Assess. Require., Capstone Course, CSU Business Assessment Test, Case Analysis	Spring 1998, Accreditation: Spring 2003
Marketing	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Written Assignments, Graduation Writing Assessment Requirement, Capstone Course, CSU Business Assessment Test, Marketing Case Analysis	Fall 1998, Accreditation: Spring 2003

College of Education				
Administration, Rehabilitation & Postsecondary Education	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio Artifacts, Written Assignments, Research Proposal	Fall 2003
Counseling & School Psychology	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio, Performance Appraisals from Field Work	Fall 1998
Educational Leadership	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Site Supervisor of Field Experience, Portfolio	
Educational Technology	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Essay Exams, Written Work, Media Product, Prototype	Fall 2000
Policy Studies in Language and Cross-Cultural Education	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio, Observation of Teaching by Supervisor	Spring 2000
Special Education	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Observation of Teaching by Supervisor	Fall 2000
Teacher Education	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Observation of Teaching by Supervisor	Spring 2000
College of Engineering				
Aerospace Engineering & Engineering Mechanics	Yes	Located in Department & Division of Undergraduate Studies	Indirect Measures: Senior Exit Survey, Alumni & Employer Surveys, Industry Advisory Board Input	Spring 1998, Accreditation: Fall 2003
Civil & Environmental Engineering	Yes	Located in Department & Division of Undergraduate	Direct Measures: Capstone Design Course, Written Technical Reports,	Spring 1998, Accreditation:

Program		Location	Measures	Date
		Studies	Oral Presentations / Indirect Measures: Senior Exit Survey, Alumni & Employer Surveys, Industry Advisory Board Input	Fall 2003
Electrical & Computer Engineering	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Student Work, Indirect measures: Senior Exit Survey, Alumni & Employer Surveys	Spring 1998, Accreditation: Fall 2003
Mechanical Engineering	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Student Work Samples, Design Project / Indirect Measures: Senior Exit Survey, Alumni & Employer Surveys, Industry Advisory Board Input	Spring 1998, Accreditation: Fall 2003
College of Health & Human Services				
Gerontology	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Exams	Fall 2000
Graduate School of Public Health	Yes	Located In Department & Division of Undergraduate Studies		Spring 1996
Nursing	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: NCLEX Scores, Didactic & Clinical Performance / Indirect Measures: Senior Exit Surveys, Alumni & Employer Surveys	Accreditation: 2001
Speech, Language, & Hearing Sciences	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Projects, Exams, Papers	Spring 1992
Social Work	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio Review, Field Work Evaluations / Indirect Measures: Alumni & Employer	Fall 2000

College of Professional Studies & Fine Arts		Located in Department & Division of Undergraduate Studies	Surveys, Course Evaluations	
Aerospace Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Physical Fitness Test, Field Training	
Art, Design & Art History	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Exhibitions of Student Work, Projects, Papers, Essays Indirect Measures: Job Placement	Accreditation: Spring 1999
Child & Family Develop.	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Pre/post Exam, Paper, Senior Project Indirect Measures: Student Survey, Alumni & Employer Surveys, Focus Group	Spring 1997
Communication	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Papers, Projects, Exams, Oral Presentations, Case Studies Indirect Measures: Student Survey	Fall 1998
Exercise & Nutritional Sciences	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Papers, Oral Presentations, Essays, Case Study, Article Critique	Spring 1997
International Security & Conflict Resolution	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Pre/post Test	
Military Science	No			
Music & Dance	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Performance Exam, Capstone Project, Portfolio Review	Spring 2001
Naval Science	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Physical Fitness Test, Professional Core Competencies	

88

		Studies		
Public Administration & Urban Studies	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Essays Indirect Measures: Student Survey	Spring 2002
Recreation, Parks, & Tourism	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio Review, Internship	Spring 1996
Theatre	Yes	Located in Department & Division of Undergraduate Studies	Direct Measures: Portfolio Review, Capstone Course, Written Work, Internships, Juried Exhibitions Indirect Measures: Student & Alumni Surveys, Senior Exit Evaluations	Fall 1991
College of Sciences				
Astronomy	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Homework Problems, Embedded Test Questions, Senior Research Project	Fall 1998
Biology	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Pre/post Test	Spring 1998
Chemistry	No			Fall 1997
Computer Science	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Samples of Student Work Indirect Measures: Senior Exit Survey, Alumni Survey	Fall 1997
Geological Sciences	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Embedded Assessments, Senior Thesis	Fall 2001
Mathematics & Statistics	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Embedded Exam Questions, Capstone Course, WebWork Assignments, Computational Projects Indirect Measures: Senior Exit	Fall 1997

			Interviews & Surveys, Alumni Surveys	
Physics	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Senior Thesis Indirect Measures: Alumni Survey	Fall 2002
Psychology	Yes	Located in Department & in Division of Undergraduate Studies	Direct Measures: Paper, Project, Oral & Poster Presentation	Spring 2005