WASC Standard 4. Creating an Organization Committed to Learning and Improvement

UC Santa Cruz conducts sustained, evidence-based, and participatory discussions about how effectively it is accomplishing its purposes and achieving its educational objectives. These activities inform both institutional planning and systematic evaluations of educational effectiveness. The results of institutional inquiry, research, and data collection are used to establish priorities at different levels of the institution, and to revise institutional purposes, structures, and approaches to teaching, learning, and scholarly work.

SHARED GOVERNANCE AND DECISION-MAKING

Like all campuses of the University of California, UC Santa Cruz has a very strong tradition of shared governance. Its Academic Senate represents the faculty in the "shared governance" of UC Santa Cruz. As mandated by the university's governing body, the Board of Regents, the Senate both locally and at the system-wide level, determines academic policy, sets conditions for admission and the granting of degrees, authorizes and supervises courses and curricula, and advises the administration on faculty appointments, promotions and budgets. This delegated authority makes the UC Academic Senate unique among faculty governments.

At UC Santa Cruz, the Academic Senate is organized into 20 committees that include senate faculty members, appropriate staff members and student members. The work of these committees is coordinated through the senate’s Executive Committee. This committee is comprised of chairs of all the major senate committees and meets regularly with the administration. Both the Committee on Educational Policy and the Graduate Council have plenary authority over all academic policies and practices of undergraduate and graduate education whereas all other senate committees serve to advise the administration on issues dealing with budget, strategic planning and faculty appointments and promotions.

In addition to the senate committees, the campus’ administration has organized an extensive array of committees whose members include campus administrators, faculty at large and faculty representing relevant senate committees, staff and students. Among these are the Chancellor’s cabinet which meets regularly with the senate executive committee, the Provost’s Advisory Council, the Academic Planning Committee, Academic Support Planning Committee, Information Technology Committee. Faculty representing senate committees and ad hoc faculty members (nominated or vetted by the senate’s Committee on Committee) sit on administrative committees as do student and staff representatives.

These administrative committees and several of the senate committees – particularly the Committee on Budget and Planning have been extremely important in the campus-wide strategic planning and budget process that has been described in Essay 3.

In addition to their representation and participation in both senate and administrative committees, undergraduate and graduate students participate in governance through their respective SUA (Student Union Assembly) and the GSA (Graduate Student Association). Both groups participate in the campus Student Fee Advisory Board that determines how money raised through student fees is spent annually.
INSTITUTIONAL USES OF DATA – ASSESSMENT AND ACCOUNTABILITY

Collection and Use of Institutional Data

Maintaining and improving educational effectiveness is greatly enhanced by the effective collection, dissemination, and use of institutional research data. The repository for most official campus data is the Office of Planning and Budget, which houses Institutional Research, Academic Planning and Analysis, Space and Capital Planning, Student Research, and Budget and Analysis units. In addition, many units across campus from Admissions and Student Affairs, to Academic and Staff Human Resources, and the Academic Divisions employ analysts who report and analyze data collected independently or are maintained in shadow systems.

Institutional Research provides a number of standard reports that are mailed or e-mailed to campus constituents and posted on the web. These include information on student enrollments, enrollment projections, Fall Fact sheets, admissions statistics, student retention and graduation, faculty workload, and course audits, as well as results of student surveys such as the annual freshmen survey, senior graduation survey and ad hoc surveys such as the National Survey of Student Engagement. In consultation with an ad hoc Institutional Research Advisory Group (the Vice Provost/Dean of Undergraduate Education (VPDUE), the Vice Provost of Academic Affairs (VPAA), Assistant Deans and analysts from across the campus), Institutional Research is developing web-based departmental profiles. These profiles will incorporate in one place a set of standardized metrics and consolidate existing data about workload, financials, faculty, and student information. These files will be available 24/7 to faculty leaders, administrators, and Academic Senate committees as they work together to provide programmatic assessment.

Additionally, information and analyses are provided directly to administrators, faculty members, or standing and ad hoc committees who request them to facilitate decision-making. A recent example of this kind of data-driven decision-making comes from the enrollment management arena. As a direct result of the de-emphasis on enrollment driven resource allocation, and in preparation for selective admissions within the UC context, the VPAA and the Vice Chancellor organized a retreat on enrollment management for Academic Deans, Academic Senate Committee members and other campus leaders. At that conference, results from a survey of admitted students intending to enroll at UCSC (SIRs, Statement of Intent to Register) as well as those intending to enroll elsewhere (Non-SIRs) were presented. Survey results indicated that the availability of majors of interest and quality undergraduate education were extremely important criteria used in making a college choice to both SIRs and Non-SIRs. Academic reputation was also extremely important to non-SIRs but relatively unimportant to SIRS. Both SIRs and non-SIRs also rated the academic reputation of UCSC lower than that of some of its closest competitors suggesting that UCSC was less competitive in attracting more academically motivated students than we would like to be. As a direct result of this conference a number of efforts were undertaken to enhance the academic reputation of the campus and to recruit more aggressively the most talented students interested in the Natural Sciences. For example, an ad hoc faculty committee worked with the admissions office to change the nature of admissions publications to emphasize academics and de-emphasize campus beauty.

The academic senate Committee on Admissions and Financial Aid (CAFA), the body charged with setting admissions criteria, has been most directly involved with articulating plans to institute comprehensive review on the campus. With the explicit goals of moving the campus toward selectivity and enhancing student diversity, the committee spent much of the past year considering data and analyses supplied by analysts and researchers in Institutional Research and the Admissions Office. In addition to running simulations of various weighting models of the comprehensive review criteria on the potential pools of admits, the Office of Institutional Research conducted regression analyses to examine the relative predictive validity of admissions criteria on freshmen success. The
results of those studies were presented in an open forum and directly impacted the weighting decisions of the committee.

While this is an example of effective data-driven decision-making, the age of our systems and lack of integration has impaired our ability to share data as effectively as we would like with planners and decision-makers. To address this situation, the campus has been actively engaged in a twofold strategy to 1) upgrade older systems to improve processes and the accessibility and accuracy of the data, and 2) improve reporting capabilities with development of a data warehouse.

Perhaps the most intensive effort is focused on implementing a new academic information system. This application, planned for full implementation in 2004, will greatly improve the processes associated with admitting, enrolling, and assessing students. Immediate benefits are improved processes, more timely data updates, on-line data access for students, faculty and staff, and enhanced query and reporting capabilities. In the interim, the recent addition of student data into the data warehouse provides a great asset for more accurate assessment of real-time educational questions.

Questions that used to go unanswered because of inaccessibility of the data can now often be answered in less than an hour. This tool has been remarkably effective in quickly dispelling long-standing myths about what our students might be doing – and has replaced those myths with real information about what students are doing. A recent example is a question related to whether students in remedial writing sections might stand to lose financial aid eligibility if we reorganized the delivery of the course and eliminated the academic credits. A quick query on students in the data warehouse revealed that only a handful of the over 1,000 students taking the tutorial were at risk of falling below minimum progress standards for financial aid, if the credit was removed from the course. This finding almost instantaneously removed a misunderstanding that for years had been a major barrier to change.

The understated goal of the data warehouse is its role in integrating disparate data systems. The implementation a new system – SCIPI (Santa Cruz Integrated Instructional Planning Information) illustrates the importance of this function. SCIPI will facilitate the accurate and timely reporting of faculty workload measures, but is fully dependent on the integration of data from three separate systems (payroll, student, and facilities. In combination these systems improve campus access to data and information, and facilitate data-driven decision-making

Assessment, Accountability, & Budget Allocation

In a series of reports made both to the academic senate and to the campus during the budget process in which the campus has engaged over the past year, EVC/Provost Simpson clearly articulated the need for the campus to engage more widely in critical reviews of all its programs, develop both quantitative and qualitative measures and benchmark performance measures to determine if programs are meeting their goals as well as campus goals, and to link resource allocations with evidence-based demonstration of success in reaching these goals.

As he stated in one of these communications: “The campus’ proposal to the Western Association of Schools and Colleges (WASC) affirms our intention to use the WASC review process, with its emphasis on accountability and evidence-based decision making, to improve both our graduate and undergraduate academic programs and to strengthen the campus and its capacity to collect and use data effectively, to disseminate information quickly and efficiently, and to incorporate evidence in the planning and decision-making processes. In a parallel way, the accountability agreements and regular program reviews in both academic and academic support units affirm the campus’ commitment to excellence. Such program reviews are necessary first steps in improving, restructuring, investing in, or phasing out programs that are no longer central to our vision or the needs of our constituencies or do not measure up to the campus standard. Such on-going review and outcomes-based assessment enables the campus to undertake “data-driven institutional reform” and is a cornerstone for maintaining the campus’ reputation for innovation.”
In his October 2002 campus communication (“Looking Toward the UC Santa Cruz of 2010 – the Path to Implementation”), the Provost concludes by asserting that in future budget processes, that accountability and assessment will be key. Academic divisions and academic support divisions (e.g., Student Affairs, Business and Administrative Services Division, Division of Information Technology) will need to quantitatively and qualitatively demonstrate their success in reaching both campus goals as well as their own. During this past academic year, the campus has spent a great deal of time determining some of the indicators that can be used to measure progress against goals and to begin to structure their institutional data systems to provide regular data to all units on their performance. Although these indicators are still under discussion, some preliminary strategic indicators have been identified.

The need for the development of clear accountability measures and linking budget allocations to accountability metrics has become even clearer in budget discussions currently underway. As part of the “EBC process”, a “Measurement Team” has been working to (1) identify and present a measurement system to evaluate the campus’ progress toward achieving its goals, objectives and strategies; (2) develop key organizational measures; (3) create measurement collection tools, systems and processes; and (4) develop an implementation plan and timeline for collecting, reporting and publishing measurements. By the time of the WASC review in February, 2004, the work of this committee should be finalized and made available to the WASC visiting committee. Currently the efforts of the Measurement Team have been focused around identifying metrics from the financial, quality, internal process and institutional learning and development perspectives around five strategic objectives identified by this process. These are: (1) to be recognized as the finest public research university in the nation for undergraduate education; (2) to create a nationally recognized and highly distinguished graduate program; (3) to strengthen research and scholarly accomplishments and distinction; (4) to serve the public through the application of knowledge and the engagement of our local, regional and state communities; and (5) to optimize the efficiency and effectiveness of our operations to provide infrastructure that supports sustainable and scaleable instruction, research and service.

Program Review as Evidence of Commitment to Excellence

The WASC process currently underway, as well has the strategic planning and budget processes in which the campus has engaged all clearly reveal that every campus unit should be doing a better job at using data to evaluate critically divisions, departments, their programs and curricula. In response to this, both the academic senate and the administration has been working together to develop better review procedures (including defined metrics of assessment), and the information data required for assessment.

Existing review protocols:

The campus insures self-reflection, planning, and high quality in academic departments by conducting rigorous, periodic reviews. These reviews are led by the Vice Provost, Academic Affairs, and involve all levels of the campus administration, as well as the academic senate. The existing review protocols, although rigorous and effective, are now themselves under review and will soon be revised to increase their effectiveness.

The existing review process begins with a request by the respective dean to the department to begin preparing a self-study, according to well-established guidelines. Simultaneously, the dean circulates a draft charge to the relevant senate committees for their review advice. At that time the dean also prepares a slate of potential reviewers, for final approval by the VPAA. Once the charge and the reviewers are approved by the VPAA, a two-day site visit is scheduled. During the site visit the external review team meets with departmental faculty and staff, undergraduate students, and graduate students. An entrance interview is held among the team, the academic dean, and the VPAA; and an exit interview is held among the team, the provost, and the VPAA. When the campus receives the final report, the dean circulates it among the senate committees for their written comment and to the department chair for written comment. A closure meeting is then
convened by the VPAA, comprising the department chair, the dean, representatives of senate committees, and the VPAA. The closure meeting is an opportunity for setting the record straight on factual matters, and for memorializing key differences in perspective by the relevant parties. The closure meeting is followed by a closure report written by the VPAA, and takes the form of a letter to the campus provost. The closure letter contains a list of follow-up questions that need to be answered by the department and the division 18 months subsequent to the closure meeting.

Critique of existing protocols:
The existing procedures have served the campus well over the years, but nevertheless can be significantly improved. The process is sufficiently cumbersome that the time interval between the initiation of the self-study and the final closure meeting is frequently too long to be as helpful as it might be. The existing procedures also limit the effectiveness of the senate in the review process, because the senate does not have access to the self-study during the time that it is reviewing the charge. Finally, the process often leads to a charge that is so diffuse that the review team has no real guidance to any serious departmental issues.

Revised protocols:
Although the task of program review is an administrative responsibility, the administration is working closely with the Senate to determine how we might improve review procedures. Pending completion of final discussions currently underway between the Vice Provost of Academic Affairs and the appropriate senate committees, a revised procedure will be introduced beginning with the 2004-2005 review cycle, with the following improvements:
1. A standard charge will be adopted.
2. The self-study guidelines will be streamlined, and the work will be divided among the department, the division, and the Office of Planning and Budget.
3. Prior to the review, the senate committees will be furnished with the department’s self-study and will be asked to submit a letter addressing their specific concerns, if any.
4. Minimum standards for the review agenda will be established, including meetings with undergraduate students, graduate students, the undergraduate curriculum committee, the graduate curriculum committee, and the chairs of departments served by the department under review.
5. The Office of Planning and Budget will survey undergraduate and graduate students and the responses will be included in the self-study.
6. Senate committees will be invited to submit candidate questions for the 18-month follow-up review as part of their response to the review report.
7. The responses to the 18-month follow-up report will be sent to the relevant senate committees for their (optional) comment.
8. The senate will be asked annually for their written commentary on the effectiveness of the review process, so that the process may be continually improved.

We believe this new process will streamline the review and increase the effectiveness of the review team during their brief visit. In a prototype experiment, we have conducted a review of the mathematics department academic programs, where we have led web-based surveys of undergraduate majors, graduate students, and students in the school of engineering served by the mathematics department. The return rate was high enough that we learned much about the instructional programs that would otherwise have been inaccessible.

A specific outcome of the mathematics review has been the establishment of a centrally-led mathematics curriculum committee charged with (1) overhauling lower division mathematics curriculum, including individual course curricula, pre-requisites, and outcome expectations for a passing grade; (2) developing standards for instructor qualifications and instructor review in the curriculum; and (3) developing standards for placement into courses. This committee began meeting in August 2003, and intends to complete its preliminary objectives in time for catalog inclusion for the 2004-05 academic year.

The overhaul of program review procedures described above is but a first step in transitioning to a more evidence-based assessment model that might be much more similar to the current WASC review process. Accordingly, programs and departments might be asked to develop topics
upon which they will focus during the review process to improve their program. Departments would be asked to provide evidence that they are “prepared” to provide their programs and that they are “educationally effective”.

A transition to this more evidence-based model would require that departments be provided with the data required for their self-analyses and accordingly, we will need to develop the data-bases required for departments and programs. These data will be provided annually to each department’s electronic portfolio. The work of one of the EBC Process, the Curriculum Management Team – is providing the campus with a process by which appropriate data would be assembled and used for academic planning.

In their current vision (their work is in progress and their results will be available to the WASC review committee during their February, 2004 visit), the cornerstone of academic planning would require the development of departmental profiles which would be used both to help a department assess its success and to frame resource allocation decisions. These profiles, organized electronically, would include the following components:

1. **Basic identification data** – i.e., department name, division, department chair, date of establishment, list of programs.
2. **Historical Data Spreadsheet** displaying ten years of data in the following categories: Faculty and staff, course delivery, retention, graduation, academic progress, majors, degrees granted, course enrollment, student FTE, faculty workload, contract and grant income, graduate student support, graduate student quality, facilities and equipment, faculty ranks and age, NRC (and other) rankings of departments and programs, appropriated funds, and expenditures.
3. **Profile summary.** A analyst would provide a few paragraphs summarizing how the department is similar to or distinct from other departments, typically highlighting the department’s unique strengths and weaknesses. For example, the analyst might point out that the department enjoys a very high national ranking, captures above average contract revenue, but is light on undergraduate majors and course enrollments. These conclusions would be drawn directly from a summary chart – Comparative Departmental Characteristics – and four attached graphs (budgeted faculty versus student credit hours, average class size, distribution of teaching load, and expenditures by category.
4. **Department Chair’s Statement.** This will allow each unit to summarize its strategic direction and distinctions. Initially, this text will be taken from existing department plans, to avoid placing additional burdens on departments.
5. **Established Departmental Goals.** This section will allow each unit to choose possible goals along with measurements they will emphasize in the near term future. These goals would those that a department would pursue as part of their program/department review process.

### Assessment of Learning Outcomes

A WASC report from UC Santa Cruz would not be complete without discussion of our current student assessment system. Since the last WASC review, we have made significant changes in how we assess and report the progress of students.

Extensive discussions have taken place about the strengths and weaknesses of conventional grading systems and the assessment system of narrative evaluations for which UC Santa Cruz is known. We now have what the *Chronicle of Higher Education* described as the most rigorous and thorough student assessment system in the country – students receive both a letter grade (A+ - F for 75% of course work and up to 25% may be taken for pass/no pass) and a “performance evaluation”.

The faculty supported this change overwhelmingly for several reasons that were related to assuring student success and fostering learning and teaching. Grades provide us with a more timely and concise report that enables us to track the progress of students and to identify students who may be in need of additional academic support. They also have become required by several state, federal and private agencies providing financial aid to students. We implemented grades to make sure that our students would not be discriminated against by these funding agencies. However, through the debate and the ultimate decision to require grades of all our students, the faculty stayed firm in their
collective conviction that performance evaluations provide a more useful tool for assessing students. Even considering the additional workload that our faculty confront in writing nearly 130,000 evaluations each year, over two-thirds of our faculty voted to retain the system because of its pedagogical value. We have been developing software tools for faculty to help reduce some of the workload encountered in preparing and submitting the evaluations. These tools have been warmly received by the faculty and are being used routinely by more than 50% of instructors.

To ensure instructional quality the senate’s Committee on Teaching (COT) works in partnership with VPDUE and the Center for Teaching Excellence to provide policy guidelines, models, and necessary support to departments and individual instructors to evaluate both their courses and their teaching. Student evaluations of instructor’s teaching and course design are used extensively throughout the University in the personnel process as well as providing individual instructors useful information that effects positive changes.

The Center for Teaching Excellence, in addition to providing curricular and instructor evaluation tools, is also very active in providing in-class evaluation of teaching. The director of the Center visits classrooms upon request of the faculty and videotapes the class and works with the faculty member to determine how to improve teaching and learning. The Center works with new faculty members and with graduate students, providing them information and advice on teaching practices and how to improve learning. Faculty and graduate students use the services of the Center extensively across the campus.

In addition to course evaluations the campus has participated in several national surveys which are designed to measure the academic engagement of our students. In 2000, UCSC was the only UC campus to participate in the inaugural launch of the National Survey of Student Engagement. The results of this survey, which can be found at, suggested that UCSC students demonstrated higher than typical levels of academic and intellectual engagement. We will participate again in this survey in the current academic year.

Not content to simply report benchmark scores we are currently involved in the UCUES (UC Undergraduate Experience Survey) project. This seeks to understand the relationship between dimensions of student engagement and learning outcomes throughout UC. Ultimately, as a result of our involvement with the project, we hope to gain a subtler understanding of the relationship between admissions criteria, various dimensions of student engagement, and positive student outcomes including retention and graduation, and alumni success. To complement the data we are collecting as part of UCUES, this year we instituted an annual survey of graduates to assess satisfaction and involvement in those activities fundamentally important to the education provided by a research university, such as research, community service and internships.

In addition to these surveys, we have recently completed an extensive on-line survey that will be required of every graduating senior. This year we inaugurated the survey; although it was not mandatory, nearly 50% of graduating seniors completed the survey. The data we sought examined their satisfaction with advising, facilities, faculty, their curriculum, general education, writing, internships and research opportunities and many other things. The results of the first survey, as well as this year’s survey will be included in our educational effectiveness analysis.

As part of an articulation of concrete student learning outcomes, some majors have developed community advisory committees to advise faculty leaders on program assessment and future development. For example, the School of Engineering is forming a corporate advisory board, the Education department consults continuously with K-12 Teaching professional community, and new program proposals are required to identify non-academic professional options for graduates.

As we prepare for the Educational Effectiveness Review, we are taking the first steps toward developing a centralized plan for identifying and collecting direct student learning outcome data. Efforts, led by the VPDUE, are already underway to assess the Freshman Experience and to ensure
that freshman learn foundation skills, acquire collegiate culture integration, and have pedagogical contact with ladder faculty.

Based on the great successes of Duke University’s “Curriculum 2000” reform of general education, the VPDUE is beginning discussion with the senate’s Committee on Educational Policy about how we assess the educational effectiveness of our general education curriculum. This will be discussed in more detail as part of the educational effectiveness review. In summary, we are beginning a process to redefine the educational goals and objectives of each of our categories of general education courses. We will then develop specific evaluation forms of each course type and ask students to evaluate the course with respect to the defined learning outcomes that are based on the objectives for the type of general education course.

These evaluations will be designed to include both quantitative assessments of defined educational outcome criteria as well as provide opportunities for students to comment qualitatively. The quantitative assessment will be used to compare courses of the same type. For example, courses that satisfy writing 1 will be compared to determine how well they reached common objectives that will be based on learning outcome and decided upon by a committee of faculty from across the campus as well as our writing lecturers. We will then compare the nearly 150 “writing 1” (basic composition) classes according to how well they met the objectives. We will examine the standard deviation around the mean for each criterion, thereby being able to determine courses that are not meeting specific criteria, and others that surpass the mean and may thereby provide best-practices to others.

We will utilize the newly formed undergraduate curriculum committee on mathematics to articulate concrete outcomes of the introductory math curriculum (through calculus) and develop tools for assessing those outcomes. We are examining common assessment methods for all students in math courses with the objective of not only evaluating the student’s learning, but also, the effectiveness of teaching by individual instructors. As such we will have a measurement of how well different instructors do in teaching materials and we will have data to help us track if changes we make in programs or curricula have positive, negative or no impact over time.

As part of the process of developing measurements of curricular effectiveness, we will look at the possibilities of using some of the assessment tools offered by ETS. We will work with the writing faculty and the campus in general to examine the new CriterionSM Online Writing Evaluation Service and determine if this tool might be useful in assessing learning outcomes of students with respect to their writing skills. We will examine if and when this test might be administered, and how the institution will be able to use the data from the assessment to improve its writing programs. We will also work with departments including mathematics, biology, psychology and others to determine whether some of the tests available in these subject areas might be useful to programs in assessing their educational effectiveness.

Neil Balmforth, Associate Professor of Applied Math and Statistics, teaching his undergraduate course on Chaotic Dynamical Systems.