

Essay 1 – Learning Environment

What are the optimal support systems and organizational structures needed to sustain and promote excellence in teaching and learning in our academic health sciences environment? (Guiding Question from Institutional Proposal)

UCSF is currently at the forefront of health sciences education and is well positioned to meet the growing demand for health care professionals. The development of the next generation of leaders in health care delivery, research and education is vitally important to the economic and social well-being of California and the rest of the world. Our continued success in this area is dependent upon the recruitment and retention of talented and diverse students.

We are committed to developing educational facilities and infrastructure commensurate with our stature in the health sciences education (Data Exhibits 5.1 and 5.2).

The Learning Environment theme aligns teaching and learning space, organizational structures, and technologies with curricular changes and capacity planning to sustain and promote excellence at UCSF. Actions include the development of a teaching space plan, with state-of-the-art technology, that considers all UCSF instructional sites; exploration of innovative programmatic and educational structures to promote teaching and learning; development of systems for data acquisition and dissemination; and an examination of strategies to recruit, support, and retain faculty, staff, and students (CFRs 3.6, 3.7).

Strategy 1. Develop a space action plan that takes into consideration our multisite educational environment and specifically includes steps to maintain the vitality of the Parnassus site, as well as a reassessment of functions and needs at Mission Bay, Laurel Heights, and other sites. In particular, we need to create a clinical skills and simulation center that serves all schools and that provides a foundation for experiential and interprofessional training (CFRs 2.7, 2.8, 2.9, 2.11, 3.6, 3.7).

The UCSF Teaching and Learning Center (TLC) is under construction on the 2nd floor of the Campus Library on Parnassus. UCSF is expanding its educational facilities with a new, state-of-the-art clinical skills, simulation, and telemedicine training center, which will open in spring 2010 (CFRs 1.2, 1.5). One floor of the Parnassus campus library (13,000 square feet) will be transformed to house this new facility, which will also integrate library education space, classrooms and a new technology commons for students (CFR 2.13). The four professional schools, the library, and the Student Academic Affairs Division have collaborated on the plans for the new center, which will support the curricula for dentistry, medicine, nursing, pharmacy, and other clinical programs (CFRs 3.11, 4.1, 4.2, 4.3). The design incorporates new tools and technologies for educating future health professionals and scientists while supporting a

culture of interdisciplinary, interprofessional, and transdisciplinary learning programs for our students and trainees (CFRs 1.5, 2.11, 3.6, 3.7).

The telemedicine training facility will enable all health professional education programs to effectively use this rapidly growing technology and to bring specialty health care available at UCSF directly to its community of patients throughout the Bay Area and Central Valley. The facility builds on the library's educational technology services (Data Exhibit 5.1) to create a multipurpose learning environment for the campus (CFR 3.6).

Another major effort, the Classroom Improvement Initiative, has enabled the campus to make dramatic improvements to classrooms at Parnassus and Mission Bay. This \$1 million initiative in 2007-08 has enhanced technology and improved the environment (furniture, painting, carpeting and lighting) in 40 classrooms. Features for some of the classroom improvements include state-of-the-art video projectors, universal wireless access, content capture devices, installed computers, and flexible floor plans. Work will continue to upgrade audio-visual equipment and improve the environment in all 54 classrooms at the Parnassus and Mission Bay sites. In addition, new classrooms are planned at the Laurel Heights site for 2009. (CFRs 3.6, 3.7).

A campus committee is reviewing systems that support the capture of course content with a recommendation due by early 2009. This feature is especially important both for students who wish to review course material after a class, and to reduce the need for students and faculty to travel between UCSF sites (CFRs 3.6, 3.7, 3.8, 4.2, 4.5).

In Spring 2008, the Chancellor approved the establishment of an endowment fund to sustain the classroom improvements that were put in place in 2007-08. Annual funds from the endowment will be used to maintain and enhance classrooms at the Parnassus and Mission Bay sites (CFR 4.2).

The medical center's strategic plan calls for the construction of a new medical center complex for women, children, and cancer patients at Mission Bay. By 2014, the 289-bed hospital complex will include: a 183-bed, family-centered children's hospital with urgent and emergency care as well as clinics for pediatric primary care and specialties; a 70-bed adult hospital for cancer patients; and a women's hospital for cancer care, specialty surgery, a 36-bed birth center, and women's clinics (CFR 4.2).

Relocation of clinical services to Mission Bay requires clinical teaching space for professional school students. A campuswide committee was recently convened to develop a plan for education space at Mission Bay, considering the new programs and functions proposed for that campus (CFRs 4.1, 4.2, 4.3, 4.5). The committee will consider a broad range of teaching space to include lecture halls, small and large classrooms, clinical simulation and clinical skills facilities, library, and student lounge areas. Additionally, participants from the professional schools are evaluating the impact this move will have on their teaching programs. The Mission Bay Education Space Plan will be finalized in early 2009.

Concurrently, the campus is updating its space Master Plan to identify major projects, especially at Mission Bay, that will be part of the next Long Range Development Plan. Academic support departments are updating data on current facilities, space requirements, and future expansion potential (CFRs 4.2, 4.3, 4.4, 4.5, 4.6). The Master Plan is expected to be ready for presentation to the Chancellor in early 2009. Space for teaching and learning, as well as student and academic services, are an essential part of this planning effort.

Strategy 2. Develop state-of-the-art technology, such as videoconferencing, telemedicine, media and simulation resources, and learning management systems for education space at all sites (CFR 3.6, 3.7)

A goal of the UCSF Strategic Plan is to “foster the educational enterprise to keep UCSF at the forefront of biomedical education and meet the growing demand for health care professionals.” To realize this strategic vision, the Education Systems Advisory Committee (ESAC) was formed in December 2007 and charged with the task of creating a world class education information system. In June 2008, ESAC produced a 5-year strategic plan with the mission of creating exceptional learning environments through the innovative use of educational technology and information services (CFR 3.7). The mission is supported by 4 strategic goals and 26 projects identified and prioritized by timeframe. This plan recognizes that modern technology is essential to implement new teaching methods and to attract and retain the best students and faculty (CFR 3.6). The workplan is included in Appendix 5.

ESAC identified two other high priority projects with recommendations due in early 2009. The first project includes the Computer Technology Support Task Force, which has been charged to identify and prioritize support needs and recommend solutions for creating a central computer technology support service (help desk). The second project is the Content Capture and Delivery Work Group. The Work Group is charged with identifying and prioritizing education content capture and delivery needs and recommending possible solutions (CFRs 4.1, 4.2, 4.3, 4.4, 4.5). UCSF can provide valuable educational material and institutional communication using these technologies. Many universities currently offer both educational and institutional content freely via webcasts and podcasts, and incoming students expect these technologies to be in place here. UCSF currently offers podcasts, as well as lecture-casts of some courses and events. The Educational Effectiveness Review report will update progress on these items.

Strategy 3. Develop campuswide systems for continuous data acquisition and dissemination (CFRs 2.10, 4.3, 4.5, 4.6)

In our Institutional Proposal, we acknowledged that “our current systems and databases that support education are outdated and insufficient. A robust, state-of-the-art student information system is essential. Academic data-gathering and analysis systems need to be designed around common vocabulary and data structures to ensure quick and easy collection and integration of data from all schools.”

Several administrative units collect, analyze, and report student data, and there have been significant changes and improvements in our student information systems at many levels since the Institutional Proposal was approved in July 2007 (CFRs 2.10, 2.12, 2.13, 3.7, 4.3, 4.5, 4.6, 4.7). These are described briefly below.

The Office of Admissions and Registrar has undertaken a variety of initiatives:

- The online course catalog has been substantively revised and updated, including the revision of many course descriptions;
- A new on-line course schedule is now in place, which enables students to identify potential elective courses offered outside of their professional schools;
- The procedures for adding, deleting, or changing courses has been streamlined, and new explanatory and tutorial material has been added to the Academic Senate website;
- A new scheduling software package (R25) now enables web-based searches for classroom availability by event, date, or location. The reservation interface also provides links for information about room attributes (e.g., AV equipment, internet connectivity) as well as reservation procedures, classroom support, and a campus map;
- A new online staff portal makes it possible to rapidly and securely obtain information about student fee payments, holds, grades, study list, contact information, etc.;
 - The recent implementation of an online report function linked to the staff portal permits staff to generate simple to complex reports based on SQL-driven queries of student data;
- A faculty portal for online entry of final course grades has improved the accuracy of grade reports, provided fast and timely student access to grades, and supported rapid production of transcripts; and
- Online electronic fee payment options (e-check and credit card) have simplified and streamlined these functions for applicants and students.

The Office of Student Information Systems (SIS) has also been active in:

- Developing an applicant data upload system to a spreadsheet, replacing a system that provided a bulk file feed;
- Adding address verification software on the server side to ensure that all addresses are in standard USPS format; and
- Integrating the R25 room scheduling software with the new online Schedule of Classes, which will enable students, faculty and staff to see what classes are offered in any campus department.

Student Financial Services (SFS) has purchased and installed new financial aid software (Powerfaids) that is scheduled to come online by the end of 2008. The new system will permit students to access their individual financial aid data. By January 2009, SFS will implement Electronic Funds Transfer (EFT), a secure and rapid method for transferring financial aid directly to students (CFR 1.7).

The newly reconstituted Office of Institutional Research has been working to establish campuswide baseline definitions (for example, the categories used to collect ethnicity data from students by various entities) and data-gathering timelines and procedures (to determine, for example, the point at which student data can be considered stable). Two recent products of these efforts are a matrix of all currently active degree programs at UCSF including a census of students/trainees in each, and an overview of the ethnicity and gender of all students/trainees (from graduate academic and professional students through postdoctoral scholars, house staff, and clinical residents). These and similar reports will be produced annually and used to create and maintain dashboard indicators of progress on priorities set by the strategic plan (CFRs 4.3, 4.4, 4.5, 4.6, 4.7).

Finally, the Graduate Division has created an online application to replace a paper application and consequent manual data transfer with its potential for error. Applicant data is now downloaded in spreadsheet format and consolidated for review. The Graduate Division's website has been substantially redesigned as well, and a redesign of the Student Academic Affairs website is underway.

Strategy 4. Explore innovative programmatic and educational structures within the organization. Identify methods to collect information based on our mission of teaching and learning, as well as on barriers – including both structural barriers, such as different academic calendars for each school, and organizational barriers, such as ensuring that the education mission remains a central focus at every level (CFRs 2.8, 2.9, 2.11, 3.4).

Much of the progress in 2008 has been described already, and when that is the case, will simply be catalogued here for accounting and organizational purposes.

In the areas of supra-departmental and across-school innovations, and the blending of scholarly and career opportunities with students' teaching, learning, and service activities, the most exciting developments have been in launching the Pathways to Discovery Programs. The groundwork for fundamental transformations that this program will incorporate has been accomplished through innovative work in the area of interprofessional education. The Interprofessional Education Task Force (IPETF) was formed 5 years ago and charged by the deans of the 4 professional schools to initiate new activities. Achievements to date are described briefly below. As a result of these activities and the efforts of the IPETF, we note growing interest across the campus in identifying processes, structures, and funding for continuing program growth in interprofessional education and for supporting faculty and student participation in developing curricular innovations to promote interprofessional education (CFRs 2.8, 2.9, 2.11).

- A 5-year report documenting substantive academic, clinical, and service progress. This includes raised awareness as well as new programming and enriched recognition of opportunities for integration across academic and co-curricular programs;
- Modular video and case-based curricular units now in development, with pilot implementation in Fall 2008;

- Medical/Nursing student shadowing program piloted in May 2008; planning for phase 2 now in progress;
- Interprofessional Education Day, for all entering health professions students, was held in September 2008 for the third time. This 2-hour interactive session features participation by all the deans, and is organized around a current challenge (such as patient safety or health disparities) that provides material for practicing interprofessional communications and teamwork;
- The IPETF is working with the library to prepare an initiative, per budget committee request, to support development of interprofessional education projects.

As part of the interprofessional education effort, the School of Medicine, with robust consultation and input from each of the professional schools and programs on campus, is launching an enterprising programmatic structure called Pathways to Discovery (PTD). The plan is for each of UCSF's schools and programs to join the program leadership structure as PTD unfolds and as they are ready to participate (CFR 4.1). In the short term, all PTD programs are open to students in all schools. The PTD program will support the academic development of the future generation of investigators, innovators, and scholars in: Health Professions Education; Clinical and Translational Research; Molecular Medicine; Global Health Sciences; and Health and Society (health systems and policy; community health, social advocacy and health disparities; social sciences in health). PTD will provide options for advancing knowledge, experience, and scholarship within the traditional time frame of each degree program, as well as for pursuing additional certification/degrees in an extended time frame (CFRs 2.8, 2.9, 2.11).

Within the School of Medicine, the Academy of Medical Educators (AME) and the Office of Medical Education have developed program models for faculty development (workshops, Teaching Scholars Program, Annual Education Day), which can be applied to the broader campus community of learners and faculty. Models for extension of the AME to other schools are under discussion (CFR 3.4).

The Simulation Center and Clinical Skills space has been described earlier, but relevant to these CFRs, the facility has already included interprofessional education as a program development priority in the temporary Kanbar Simulation Center at Mount Zion. The participatory, inclusive process for identifying space and collaborating on design for the permanent TLC, as outlined above, has laid the ground for robust activity in this arena. Other aspects of common infrastructure across schools that were described earlier, but also support the CFRs in this segment, are shown in Appendix 6.

Strategy 5. Undertake a critical examination of strategies to create a positive culture of recruitment and retention at UCSF. Two attractive means of doing so are:

- 1. Develop the Clinical and Translational Science Institute (CTSI) as an institutional strength for recruiting and retaining faculty and students.**

2. Extend our learning environments and outreach to sites within San Francisco and throughout California, for example, by building upon existing community service activities and clinical services provided by the four schools, and by providing opportunities for staff development and training through nonacademic UCSF courses and online access to education and professional development.

UCSF leadership clearly recognizes that our continued success and excellence relies heavily on our ability to attract and retain the best people. One of the 7 goals in the UCSF strategic plan is “Promoting a Supportive Work Environment – to recruit, mentor and retain the highest caliber faculty, staff, students, residents, fellows, and postdoctoral scholars” (CFRs 3.1, 3.2). To achieve this goal, work is underway in many areas. UCSF received positive news this Fall when *The Scientist* ranked UCSF’s work environment as one of the most supportive in the nation. The article is in Appendix 23.

In 2001, the Chancellor commissioned a survey to assess the climate for faculty, particularly women and under-represented minorities, at UCSF. Based on the survey findings, the Chancellor convened a Task Force on Faculty Life, which issued a report in February 2003 including several major recommendations. One recommendation was to create a committee to focus on ways to improve faculty life. The Chancellor’s Council on Faculty Life (CCFL), which has been chaired by Dr. Sally Marshall, Vice Provost, Academic Affairs, was formed as a result of the recommendation. (CFR 3.3).

The CCFL is made up of 21 faculty from all ranks, series, and disciplines, and includes several members who participated in the faculty leadership program described below. The CCFL is charged with implementing responses to the Task Force recommendations, as well as considering other means of improving faculty life. The CCFL’s main recommendations and actions are listed below, and additional details can be found in Appendix 7 (CFRs 3.2, 3.3, 3.4).

- Provide opportunities for leadership training for faculty
- Create a formal faculty mentoring program
- Provide institutional and social welcoming
- Recognize collaborative research activities
- Increase transparency of processes
- Address work-life balance
- Demonstrate leadership on faculty life issues
- Improve processes for faculty searches and advancement

The Clinical and Translational Science Institute (CTSI) award also contributes to the positive environment for faculty recruitment and retention. UCSF was one of the first 12 academic institutions to receive the CTSI award from the National Institutes of Health (NIH). The charter of CTSI is to transform clinical and translational research to ensure that the best health solutions get to patients as quickly as possible. CTSI has two roles in retention and recruitment. One of the CTSI’s initiatives relates directly to recruitment and retention: “to enhance career development of faculty and trainees involved in clinical investigation and translational research by providing mentoring, providing

opportunities to catalyze original research, and changing the academic culture to appropriately reward original, multidisciplinary, collaborative work.” Secondly, the CTSI award should attract faculty who want to be part of an institution that is a leader in translational science (CFR 3.2).

CTSI’s role in recruitment and retention is evident through the recently released website, which provides faculty members with an extensive list of training and advancement opportunities including easy access to program announcements, applications, financial information, and eligibility requirements of program funding sources (<http://ctsi.ucsf.edu/training/browse-ucsf-opportunities>). These range from formal and informal didactic sessions to career development awards to career advancement programs. This website assembles all information into one location, raising visibility for all faculty (CFR 3.4).

The CTSI Resource Allocation Program saves faculty time and effort by listing intramural funding opportunities along with program name, eligibility, funding amount, application process, restrictions, and a page to compare different grant programs. Many of these opportunities are geared to junior faculty or those working in new areas where start-up funding is essential before moving to an NIH grant (CFR 3.4).

Mentoring has a significant role in career development. The CTSI Mentor Development Program (MDP) is a joint effort between CTSI and the Faculty Mentoring Program. The CTSI MDP will create an integrated environment for senior mentors and mentors-in-training, encouraging creative and innovative networking, discussing a range of mentoring challenges and a myriad of solutions, developing a toolbox of strategies, and using discussions and collective experiences to build a community of mentoring excellence. The MDP developed a 5-month training program that will be offered twice a year. In early 2008, the first cohort of 18 mid-career faculty, representing all four schools, completed an innovative, six-month course in mentoring (CFRs 3.2, 3.4).

Another effort is underway for junior faculty. The CTSI Junior Faculty Mentoring Program will collaborate with and complement the campuswide UCSF Faculty Mentoring Program and other ongoing UCSF research mentoring programs. The program will link junior clinical and translational research faculty members with an experienced lead research mentor who takes clear responsibility for their research success. The CTSI Junior Faculty Mentoring program was initiated in June 2008 (CFR 3.4).

Staff retention and development efforts have also been a focus of activity. UCSF Campus Human Resources recently launched a new website, Career Development at UCSF, along with an Introduction to Career Planning. The website (at ucsfhr.ucsf.edu/index.php/careerdev/), Career Development at UCSF, provides a three-step career planning process; resources to help assess goals, skills, and interests; framework for designing a personal career development plan; stories and advice from UCSF employees working to reach their career goals; tips on resumes and interviewing; and four pilot career paths. Additionally, the UCSF Campus HR department has a series

of Career and Staff Development classes for those interested in exploring career opportunities (CFRs 3.3, 3.4).

Other new staff initiatives include Leadership Development, a Supervisor Certificate Program, and implementation of a systemwide administrative learning management system for all UC campuses. The Leadership Academy is designed for higher level leaders. The Academy, which began in Fall 2008, is comprised of 9 full-day sessions, including experiential learning events; a leadership style, value, and decision-making assessment; executive coaching; mentoring; and participation in collaborative problem-solving work groups (CFR 3.4).

Mid-level managers are eligible to participate in the Leadership Institute, which consists of 5 full-day sessions including experiential learning events; a leadership style, value, and decision-making assessment; mentoring; and participation in collaborative problem-solving work groups (CFR 3.4).

The UCSF Supervisory Certificate Program is a flexible program based on performance skills and provides UCSF supervisors and supervisor aspirants with an opportunity to develop supervisory competencies. The certificate enhances skill development in critical thinking, delegating, coaching, communications, organizational awareness, team leadership, human resources management, and financial management. We are now implementing UC's systemwide learning management system that will make it possible to deliver and track a comprehensive array of coursework provided by UC, and make it easier for employees to monitor their progress (CFRs 3.3, 3.4).

Recruitment and retention of students at UCSF is much less of an issue for UCSF than for undergraduate institutions. Our reputation and ranking places UCSF high on the selectivity list, so our applicants greatly outnumber the places available (Data Exhibits 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, and 2.3). Additionally, students who come to UCSF are highly motivated and well qualified, and our attrition rate is relatively low. Nevertheless, the campus offers a wide array of support services to students, and has invested in new support services for students who are disabled, who are the first in their families to attend a university, who need mental health counseling, who need financial aid advising, or who are in need of enhanced study skills. These services are designed to enhance the academic success of these students (CFRs 2.12, 2.13).

More broadly, the increased cost of education, the limited sources of grant and scholarship funds, and the recent increase in indebtedness among graduates are growing concerns. Many of our competitors have announced new financial aid models that use endowed funds to offset the cost of education for those below certain income levels. Our campus efforts to increase diversity are described more fully in Essay 3. In a survey of accepted students, lack of financial support was cited as one of the reasons for their decision to decline admission. To address these financial concerns, the Chancellor has identified increased financial assistance as one of the University's top priorities. In addition, the campus Development Office is renewing efforts to secure private funding for student financial support (CFRs 1.7, 2.12, 2.13).

Community partnerships contribute to successful recruitment by raising UCSF's profile and giving young people and their families exposure to the university, its people, and its activities. Extending the UCSF learning and service environment to the community is a goal of the University Community Partnerships Program (UCPP) and supported through UCSF's strategic plan. UCPP was established by the Executive Vice Chancellor and Provost in the spring of 2006 to coordinate the many existing partnerships between UCSF-affiliated individuals/groups and San Francisco-based community organizations and to support new partnerships (CFRs 1.7, 2.9).

UCPP (<http://pub.ucsf.edu/newsservices/releases/200806205/>) is designed to build collaborative relationships between UCSF and the community, promoting civic engagement, fostering community health and well being, and enhancing the environment for education, research, employment, and patient care at UCSF (CFRs 1.1, 1.7). The UCPP serves as a bridge between UCSF and the community, emphasizing partnerships that value and respect the assets and diversity of both.

In summary, our efforts to provide a stimulating and successful environment for teaching and learning are guided by five strategies. The first involves representatives from campus constituencies working together to develop a space action plan. The second strategy aims to implement state-of-the-art technology throughout the campus, enabling us not only to better link our teaching sites, but also to reach out to communities that need and can benefit from the resources UCSF has to offer. A third strategy will provide the campus with a better system for collecting and disseminating data. Fourth, we have developed and are implementing innovative programmatic and educational structures, such as Pathways to Discovery, that consolidate and advance opportunities for interprofessional education. Finally, we are continually working to improve our outreach activities so that we can effectively recruit the best and most diverse faculty, staff, and students. This effort includes strong programs for faculty development, as well as resources to support and sustain faculty, staff and students at UCSF.