

A photograph of the UCLA Campanile building, a large brick structure with two prominent towers. The building is set in a courtyard with a paved plaza in the foreground. A large tree is on the left, and a person is sitting on a low wall in the middle ground. The sky is blue with some clouds. The text "UCLA Report for the WASC Educational Effectiveness Review" is overlaid in white serif font.

**UCLA Report for the
WASC Educational Effectiveness Review**

December 2009

Educational Effectiveness Review Report

**Prepared by UCLA for the
Western Association of Schools and Colleges**

Contact Information:

Judith L. Smith
Dean and Vice Provost for Undergraduate Education
Professor and Accreditation Liaison Officer
2300 Murphy Hall
UCLA
WASCalo@conet.ucla.edu

Mitsue Yokota
Campus WASC Coordinator
2300 Murphy Hall
UCLA
myokota@college.ucla.edu

December 2009

Table of Contents

INTRODUCTION	1
ESSAY A	3
<i>Academic Planning in a Changed Fiscal Environment</i>	
The Current Budget Crisis	
The Emerging Academic Plan: Excellence, Diversity, and Engagement	
Action Plans for Transforming UCLA	
Accountability and Assessment	
ESSAY B	9
<i>UCLA's Approaches to Evaluating Educational Effectiveness</i>	
Focus on Students: Evaluating Performance and Understanding Perspectives	
Focus on Courses: Evaluating Teaching and Learning	
Focus on Programs: Evaluating Learning and Performance Indicators	
Reflections on an Evolving Process	
ESSAY C	19
<i>UCLA's Capstone Initiative: Engaging Students in Creative Discovery</i>	
Background	
Identification and Survey of UCLA's Inaugural Capstone Majors	
Certification of the Inaugural Capstone Majors	
Experiences in the College: Senior Survey	
Future Plans for UCLA's Capstone Initiative	
Summary	
ESSAY D	34
<i>UCLA's Educational Technology Initiatives: Enhancing Learning and Teaching</i>	
Introduction	
Common Solutions for Campus Educational Technology Issues	
Assessing Learning and Teaching Using Educational Technology Tools	
Developing and Assessing Information Literacy Across Disciplines	
Looking to the Future	
CLOSING COMMENTS	49

List of Appendices

Appendix 1 – An Annotated Endnote Chart

Appendix 2 – UCLA’s Response to the Report of the Site Visit Team

Appendix 3 – Revisions to the Criteria for Review and the Institutional Review Process

Appendix 4 –Essay Workgroups and Events Timeline

Appendix 5 – Electronic Data Portfolio

INTRODUCTION

UCLA's *Educational Effectiveness Review Report* for the Western Association of Schools and Colleges (WASC) represents the third and final phase of the campus' reaccreditation. The first phase started with the submission of the [Institutional Proposal](#)¹ that was approved in June 2006. The second phase incorporated four steps for us: 1) submitting the [Capacity and Preparatory Review Report](#)² (December 2007); 2) hosting a site visit (October 2008) and receiving the Site Visit Team's [report](#)³ (December 2008); 3) submitting a [response](#)⁴ to that report (January 2009); and 4) receiving a [letter](#)⁵ (February 2009) from Ralph A. Wolff, President and Executive Director of the Senior College Commission of WASC. The letter informed Chancellor Gene Block that UCLA's accreditation was to continue with the Educational Effectiveness Review visit in Winter 2010.

Groundwork for the third reaccreditation phase has included writing the *Educational Effectiveness Review Report* and preparing for a second campus visit (February 24-26, 2010). Over the past year, the campus reaccreditation Steering Committee has actively engaged many segments of our community. To this end, faculty and students—as well as alumni and staff—have sought ways to illustrate UCLA's dedication to WASC's "Core Commitment to Educational Effectiveness":

The institution evidences clear and appropriate educational objectives and design at the institutional and program levels, and employs processes of review, including the collection and use of data, that ensure the delivery of programs and learner accomplishments at a level of performance appropriate for the degree or certificate awarded.

UCLA's report for the Educational Effectiveness Review is composed of four essays. In *Essay A*, we address academic planning in a changed fiscal environment and focus on the alignment of institutional resources to achieve campus goals articulated in [Transforming UCLA for the Twenty-first Century](#)⁶, a proposal that sets action and accountability plans for the next decade, to 2019, when UCLA officially marks its 100th anniversary. This proposal introduces guiding principles, including ensuring financial security—an issue of grave concern, as the University of California copes with an unprecedented reduction in state funds. *Essay A* also situates our originally planned theme essay on facilitating interdisciplinary education and research in a substantially broader context, as interdisciplinarity emerges to be a cornerstone of UCLA's academic excellence. Action plans in *Transforming* initiate our "road map" (a phrase introduced by the WASC Site Visit Team) for promoting interdisciplinary education and research.

Essay B provides the framework for our approach to assessing educational effectiveness; it is UCLA's "integrative" essay for this report, which is required by [WASC Handbook](#)⁷ guidelines. In this essay, we demonstrate UCLA's efforts to evaluate the effectiveness of educational programs using indirect and direct evidence from local and national surveys, class evaluations, and program reviews. We also discuss plans for incorporating the assessment of learning outcomes in the Academic Senate Program Reviews, a topic introduced in our *Capacity* report.

The remaining essays address two other themes that were introduced in our *Institutional Proposal* and *Capacity* report. *Essay C* focuses on enhancing and assessing undergraduate education through the implementation of UCLA's Capstone Initiative. *Essay D* highlights UCLA's Educational Technology Initiatives and provides concrete examples of faculty who are introducing technology to enhance teaching and facilitate student learning, especially at the lower division level. These theme essays, as well as *Essays A* and *B*, focus on important campus

initiatives that will be sustained for the foreseeable future and reviewed at the time of UCLA's next reaccreditation by WASC a decade from now.

This report includes five appendices. *Appendix 1* contains an Annotated Endnote Chart with a URL listing for each dataset, document, and website cited in the text. We provide this listing for those reading the report offline. For the electronic version, each endnote is hyperlinked. We include many of the documents and datasets as evidence of UCLA's commitment to educational effectiveness; others provide the reader with archival and supplemental information about key topics featured.

Appendix 2 lists each recommendation from the WASC Site Visit Team report and provides a brief statement that summarizes UCLA's response. Whenever possible, the essay workgroups and the campus reaccreditation Steering Committee address major concerns directly in the essays of this report. Where this was not possible, we make summary comments in *Appendix 2* and will provide additional details, as necessary, during the February 2010 site visit.

Appendix 3 addresses substantive changes in the Criteria for Review (CFR) recently introduced by WASC in its *Standards of Accreditation*. We do this by including WASC's *Table A*, which lists each of 21 CFR modifications and poses a set of self-assessment queries. We address these queries by focusing on current campus plans or proposed actions to align practices and policies with the revised criteria. Also in *Appendix 3*, we address the three topics that WASC recently added to its "Institutional Review Process." We do this by including WASC's *Table B*, which lists the new topics (i.e., "Student Success," "Program Reviews," and "Sustainability of Effectiveness Plans") and poses institutional questions for each. We answer the questions by citing relevant evidence drawn upon in our *Capacity* report or included in this report.

In *Appendix 4*, we list the membership of the three groups (Reaccreditation Steering Committee, Capstone Workgroup, and Faculty Educational Technology Committee) responsible for drafting the essays. We also post a timeline of events listing campus groups engaged over the past year in reviewing components of these drafts. The timeline ends with a list of agencies that reviewed the final "campus draft" in October (2009). These included numerous Academic Senate committees, two administrative groups (Chancellor's Executive Committee and EVC/Provost's Deans' Council), governing councils for the Graduate Students Association and the Undergraduate Students Association, as well as key alumni and other external members of the Chancellor's Competitiveness Council who attended the Leadership Retreat in October (2009).

Appendix 5 is an electronic data portfolio that includes a data form and two inventories required by WASC: a) [Summary Data Form](#)⁸; b) [Exhibit 7.1](#)⁹ – *Inventory of Educational Effectiveness Indicators*; and c) [Exhibit 8.1](#)¹⁰ – *Inventory of Concurrent Accreditation and Key Performance Indicators*. In *Essay B*, we discuss the development of the two inventories as part of our evaluation framework. In addition to these documents, UCLA's [data portfolio](#)¹¹ developed for our *Capacity* report continues to be available online.

In our *Closing Comments*, we highlight UCLA's efforts to meet the four primary purposes that WASC has identified for the Educational Effectiveness Review. To that end, we summarize our efforts to: 1) evaluate the effectiveness of our educational programs; 2) establish practices for evaluating student learning and then using results to improve teaching and learning; 3) align institutional resources with activities to achieve our educational objectives; and 4) promote special initiatives—such as our Capstone Initiative and Educational Technology Initiatives, which are aimed at enhancing educational effectiveness.

ESSAY A

Academic Planning in a Changed Fiscal Environment

As noted in the *Introduction*, we had originally planned to present a theme essay on “Facilitating Interdisciplinary Education and Research.” In the past year, however, UCLA’s fiscal environment has changed dramatically. Fiscal support from the State of California for the University of California has fallen 20%. Although the state funds represent only 8% of UCLA’s total budget, these funds are what sustain our academic programs, including faculty salaries, classrooms, academic advising, and much more. Because it is extraordinarily unlikely that this precipitous decline in state support will be reversed in the next few years, the current situation is not a fiscal crisis; it is a changed reality.

Under these circumstances, we refocused our efforts and replaced the original essay with one on academic planning in a time of rapid change. The new fiscal environment has been central to every discussion in the past six months and will continue to figure into all aspects of institutional planning in the year ahead. UCLA has been developing a campus plan that was introduced in [Essay 1](#)¹ of our *Capacity* report. *Transforming UCLA for the Twenty-first Century* is the first institution-wide plan for UCLA. The draft plan was reviewed by various constituencies, subsequently revised, and then [posted](#)² for further review and comment.

The plan is grounded in four principles: 1) ensuring financial security; 2) sustaining academic excellence; 3) facilitating civic engagement; and 4) increasing diversity and fostering scholarship related to diversity. The use of the word “transforming” in the title signals our ambitions; however, in the current fiscal climate, the specific goals will need to be adapted and aligned with existing resources.

We begin this essay with descriptions of the budget crisis, the specific budget reduction plans that have been put in place, and the campus-wide process developed to support budget planning and ensure that resource allocations will align with campus priorities and goals. This discussion anchors our presentation of the other three principles within the academic plan and how it relates to the WASC themes. We conclude by looking ahead to how we will assess the success of our planning efforts—in particular, how they will have enabled UCLA to sustain excellence and innovation in a challenging and shifting environment.

The Current Budget Crisis

The 2009-10 budget for the State of California authorizes an \$813 million cut in state support for the University of California (UC). This corresponds to a 20% decrease in the general funds that largely support instruction, including faculty and staff salaries. UCLA’s share of this reduction will amount to more than \$117 million. When combined with the \$14 million in cuts carried forward from 2008-09 and unfunded cost increases of approximately \$26 million for utilities, benefits and retirement contributions, the total shortfall is more than \$150 million. A budget reduction of this size is unprecedented within the university and was not announced until late Spring 2009. UCLA’s immediate challenge is to accommodate these enormous budget cuts while preserving the quality of education and research programs.

In our initial planning for these budget cuts, we set out to achieve our budgetary targets through a combination of permanent reductions and one-time transfers from reserves. The campus plan to address the expected shortfall of ~\$131 million for 2009-10 includes the application of new

revenues, as well as the use of mandated salary savings, across-the-board cuts, and targeted budget reductions; to date, these include:

- \$7.5 million in new revenue from an increase in the UC Educational Fee (i.e., tuition) paid by UCLA students;
- \$37 million in expected salary savings from an employee furlough program³ mandated by the UC Office of the President for one year (2009-10);
- \$33 million from across-the-board cuts of 5% in state funds implemented by deans and vice chancellors;
- \$30 million in targeted cuts to be identified the Chancellor and Executive Vice Chancellor/Provost (EVC/Provost), and
- \$23.5 million in one-time reductions in UCLA reserves from various sources.

To the extent possible, the Chancellor and EVC/Provost will apply additional cuts to selected campus operations. For example, the campus could save \$5 to \$10 million by streamlining and consolidating campus administrative functions, capturing income from auxiliary enterprises and the medical center, and rescinding selected chancellorial commitments to units. Also, the campus could save \$5 to \$10 million by consolidating information technology services, reducing central administrative costs, and implementing enhanced energy conservation strategies.

In the near future, UCLA budgetary decisions will be guided by principles and recommendations developed through the *Budget Toolbox Project* and the new academic plan. The *Project* was initiated early in 2009 to support future campus academic and budgetary planning. Three taskforces were appointed to assist the campus in developing plans for sustaining academic strength through: 1) realigning academic programs with new budget realities; 2) maximizing cost savings and efficiency; and 3) increasing non-state revenues. Each taskforce included faculty and administrators and met frequently between January and April 2009. Three reports were issued:

- The report⁴ from the Academic Programs Taskforce recommended options for reducing the cost of the academic program and re-allocating resources within the academic program to meet budget reductions;
- The report⁵ from the Cost Savings and Efficiency Taskforce recommended options for reducing administrative costs and improving operational efficiency; and
- The report⁶ from the Revenue Taskforce recommended options for increasing non-state revenues to support academic and administrative programs.

The most important recommendations emerging from the *Toolbox* reports concern the need to review and revise curricula to protect the core of UCLA's academic programs. For example, the report recommends: 1) consolidating academic units and reducing the number of majors and minors offered; 2) prioritizing course offerings and developing an efficient mixture of course formats that preserves seminars, capstone courses, and the like; 3) reviewing academic requirements to determine if they are necessary for today's students; and 4) expanding the use of educational technology. These recommendations are grounded in the campus priorities described in our *Capacity* report and in this *Educational Effectiveness* report.

Targeted cuts for 2009-10 for education and research programs supported by state funds include reductions of:

- 50-75% in the hiring of new faculty by limiting authorized faculty searches to no more than 25;
- 10% in temporary instructional costs (lecturers and teaching assistants) by consolidating course offerings and eliminating selected courses;
- 30-50% in state funding for research centers;
- 40% in state funding in support to clinical teaching services; and
- 10% in state funding for student services.

A serious concern is that these steps will lead to larger classes and an increase in faculty teaching workload, impacting the quality of instruction. To mitigate some of the negative impacts, we are taking three steps. First, the EVC/Provost has allocated over \$7 million in temporary bridge funding to enable units to fulfill their obligations to students. We anticipate that additional bridge funding will be available for Fall 2010 but at a lower level. Second, we will reduce undergraduate enrollment to improve the student-faculty ratio and reduce average class size. Third, the campus is engaged in a planning process to align student needs, academic offerings, and budget.

In his memo to the campus, EVC/Provost Waugh noted that: “Given limited time for analysis and discussion and budget uncertainties, the recommendations emerging from these reports point to ideas that are worthy of further consideration, not full-blown proposals ready for implementation.” These *Toolbox* reports thus represent only the first phase of work; the next phase is to use these principles and ideas to undertake critical assessment of specific proposals for which further study is needed, and to develop implementation plans for approved projects to go forward. Waugh also noted that: “While the size of the budget cuts UCLA will continue to face in 2010-11 and beyond is not yet known, the unprecedented nature of this fiscal crisis requires the campus to undertake new approaches to fiscal, operational, and academic planning.”

Relevant to this essay are several principles identified by the Academic Programs Toolbox Taskforce.

1. *UCLA should protect the quality of the academic enterprise to the greatest degree possible.* A large percentage of UCLA’s state funding is committed to faculty salaries and benefits. Consequently, a portion of the budget cuts will need to be accommodated through faculty attrition, even as we cut administrative costs and seek new revenues. Our academic programs must be tailored to these new circumstances, as must the pace at which we implement innovations such as capstone experiences. These efforts are consistent with our commitment to excellence, in that cost-cutting and revenue-generating activities have the potential to improve overall quality by focusing our efforts on priorities and strengths.
2. *Across-the-board solutions, including budget cuts, mandatory furloughs, and hiring freezes may be necessary but are neither sufficient nor desirable in all cases.* Where possible, targeted solutions are preferred, so that we can protect activities that are core to UCLA and create space for new opportunities.
3. *Both top-down and bottom-up approaches are necessary.* Many cost-cutting and revenue-generating activities should occur at the unit level. For example, academic departments are

best able to identify the courses that are core to a major, while an administrative director is best able to determine how to reduce the number of staff. There remains a role for central administration in reviewing and assessing local activities to ensure that they meet institutional needs and are consistent with university policies and values.

Selected and strategic implementation of the *Toolbox* recommendations started in Summer 2009. In a [July 2009 letter](#)⁷, EVC/Provost Waugh asked deans and departments to implement taskforce recommendations relevant to educational programs. Waugh also convened a budget advisory group comprised of administrators and faculty. Based on the feasibility and anticipated benefits of the ideas generated, the advisory group is expected to assist the EVC/Provost in establishing priorities for follow-up, determining action plans for each high-priority recommendation, and developing an assessment framework for the implementation phase.

The Emerging Academic Plan: Excellence, Diversity, and Engagement

UCLA's *Transforming* academic plan will establish our framework for moving forward. The plan is grounded in three priorities. Each is discussed here in light of UCLA's reaccreditation.

Academic excellence requires us to recruit and retain the very best students, faculty, and staff. To achieve this goal and remain competitive, we must make the UCLA campus among the most desirable work environments in the country. To that end, we plan to increase housing for students, post-doctoral scholars, faculty, and staff, and we will strive to ensure competitive salary levels for faculty and staff, as well as increased financial support for students.

Academic excellence is also vested in the strategic choices we make in the coming decade to advance our tradition of world-class scholarship and teaching. Among the many elements that highlight UCLA's distinction is interdisciplinary teaching and research. As noted in [Essay 7](#)⁸ of our *Capacity* report, the campus has extraordinary capacity for interdisciplinary scholarship. In the past decade, UCLA has supported initiatives in biosciences, nanosystems, international studies, environmental studies, society and genetics, stem cell research, digital humanities, the arts, and more. We continue to strive to remove barriers to scholarly and pedagogical interactions, improve collaboration and consortium building, and seed new opportunities for integrative learning by undergraduate and graduate students.

Diversity has long been championed by UCLA, both because it is central to providing a broad, enriching educational experience, and also because our students, faculty, and staff should reflect the remarkable diversity of the State of California. As a minority-serving institution, UCLA is already one of the most diverse research universities in the nation. Yet, as discussed in [Essay 3](#)⁹ of our *Capacity* report, despite having a diversity initiative in place for a decade, we have made only modest progress in increasing the diversity of our faculty and student body. In their report, the WASC Site Visit Team noted that:

UCLA has made remarkable and commendable progress building an institutional based infrastructure for diversity oversight. Many of the nationally recognized "best practices" are now a part of the university's culture and practice. University leaders have created administrative positions and established advisory councils, including broad based advisory groups that report directly to the Chancellor. In addition the academic community has set goals that intend to invigorate campus attention.

Chancellor Block identifies diversity as a [core value](#)¹⁰ and a top campus priority, and the *Transforming* plan focuses on research, scholarship, and teaching/learning related to diversity. In

addition, the Chancellor's Advisory Group on Diversity has drafted a campus [Diversity Plan](#)¹¹. The Plan is organized into five sections that discuss *challenges* and specific *action plans* for: 1) increasing the diversity of our faculty; 2) increasing the diversity of our graduate student body; 3) increasing the diversity of our undergraduate student body and introducing more issues of diversity into the curriculum; 4) increasing attention to issues of diversity and campus climate by Student Affairs; and 5) increasing the diversity of UCLA's campus staff. Three themes unify all five areas: 1) improving campus climate; 2) building an academy that promotes the academic 'pipeline' from freshmen to faculty; and 3) improving communication about diversity and diversity programs within the campus and externally. The draft of the Diversity Plan will be reviewed by campus agencies during 2009-10 before it is finalized.

Civic engagement at UCLA means working to make a difference in the civic life of Los Angeles. We do so by directing the knowledge and skills of our students, faculty, staff, and senior leaders to address societal problems and improve the quality of life in our community. UCLA endeavors to advance community-based, applied, and translational research, as well as civic education, through classroom instruction, service learning, and professional training. These activities are already widespread at UCLA; our challenge is to coordinate and focus them, elevate civic engagement as a core institutional value, and make this work more visible on campus and in the community. UCLA's status as an international university complements this focus on civic engagement. The benefits of international engagement to UCLA and Los Angeles include the direct economic impact of preparing students for the global workforce.

Action Plans for Transforming UCLA

The draft academic plan outlines actions to be taken in several areas, including faculty recruitment and retention, teaching and education, and civic and international engagement. Four sets of actions center on teaching and education themes that were developed as part of UCLA's reaccreditation:

1. articulate and assess learning outcomes;
2. continue to develop opportunities for capstone projects;
3. improve teaching space and expand capacity in educational technology; and
4. develop new methods to enable faculty to teach outside their own departments.

The first action listed above is at the core of *Essay B* of this report. UCLA expects all degree-granting programs to articulate learning outcomes, to develop a system for assessing them, and to describe in their Academic Senate Program Reviews any changes that were informed by, and resulted from, the learning outcomes assessment. Also, the administration and Academic Senate are designing plans to ensure that processes for evaluating educational effectiveness are sustained and embedded in the culture and practices of the campus. The second action is described in *Essay C*. The third action is the focus of *Essay D*.

The fourth action is part of a broader goal to establish UCLA as "the leader in fostering new forms of collaborative, multidisciplinary research and teaching." One component of this effort, the "Costs of and Alternatives to UCLA's Buyout Model," was addressed in *Essay 7* of our *Capacity* report and in Appendix B of the Academic Programs Taskforce report. Many courses are offered by interdisciplinary programs, "yet long-established practices have created obstacles to faculty teaching outside their own departments" which results in a costly system causing campus units to pay twice for teaching. The report concluded:

In short, the buyout culture means that many departments expect to be reimbursed for the “loss” of a faculty member who might teach in the department if he or she were not teaching outside the department. The reimbursement is intended to cover all or part of the cost of a lecturer to make up for the absence of the latter faculty member. In practice, however, the department does not always need to hire a lecturer when a faculty member commits to teaching a course outside the department. Furthermore, the practice implies that departments have no ongoing responsibility to support interdisciplinary teaching when, in fact, UCLA is committed to a variety of programs that do not fit within the departmental structure, such as the Freshman Clusters, General Education, and IDPs.

Appendix B of the Academic Programs Taskforce report ends with a series of recommendations to address changing UCLA’s “buyout culture.” These recommendations, as well as actions outlined in the *Transforming* plan, frame the “road map” suggested by the WASC Site Visit Team in their [report](#)¹² submitted to the WASC Commission in November 2008.

Accountability and Assessment

UCLA’s *Transforming* plan is intended to provide direction until the 2019 centennial, which coincides with UCLA’s next WASC reaccreditation. Our progress in establishing and assessing learning outcomes, expanding capstone experiences for undergraduates, enhancing teaching and learning with educational technology, and facilitating interdisciplinary research will reflect our commitment to academic excellence and innovation. We have just begun to identify the measures and outcomes that will allow us to evaluate and demonstrate the effectiveness of our academic planning efforts and adaptive responses to the changing environment. The following are some of the questions that will anchor this reflective analysis.

- What will we have learned, as an institution, through the capstone and educational technology initiatives? To what extent will these initiatives have enhanced academic excellence and contributed to our capacity for innovation? How, and to what extent, will these initiatives have contributed to student success?
- Were the strategic actions taken in this challenging environment successful in transforming UCLA into a diverse academic community, an exemplar for problem-based teaching and research, and a leader in fostering new forms of multidisciplinary collaboration in research and teaching?

To address institution-wide planning questions, we will establish an accountability framework and assessment plan. At the unit level, the framework will be grounded in the academic program review process that provides a means for assessing the unit’s effectiveness and progress. At the institutional level, the quantitative tools available to us include a new [accountability framework](#)¹³ being developed by the UC Office of the President; a common core of performance indicators and measures for each unit, including workload measures, enrollment, resources, and performance indicators unique to the unit that reflect that unit’s context and goals; and trend data, including comparisons with peer institutions.

Looking ahead. The impact of the budget cuts is only beginning to be felt. The consequences of further cuts and higher student fees are likely to include fewer graduate students, concerns about retaining faculty and staff, and widespread feelings of apprehension. Although the changing fiscal environment will impact the pace at which we are able to make progress in the initiatives described in the following essays, it will not diminish our effort or commitment to achieving the goals we have set.

ESSAY B

UCLA's Approaches to Evaluating Educational Effectiveness

Learning and teaching at UCLA are guided by the belief that undergraduate, graduate, and professional school students and their teachers belong to a community of scholars. We are dedicated to providing students with foundational understanding of a broad range of disciplines followed by opportunity for in-depth study of a chosen field. We are also engaged together in discovering and advancing knowledge and practice. We believe learning occurs not only in the classroom but also through engagement in campus life as well as in communities and organizations beyond the university.

Rooted in our commitment to ensuring academic excellence, UCLA has developed a framework for assessing educational effectiveness that has three distinct, but complimentary, focal points. The first focuses on the *student*, with specific emphasis on evaluating academic performance and understanding students' perspectives on their educational experiences. The second attends to *course*-based instruction, incorporating new approaches and feedback mechanisms for evaluating teaching and learning. The third highlights *program* level considerations and is grounded in evaluating learning and performance indicators.

The strength of this framework lies in its broad applicability across UCLA's diverse academic programs. Importantly, it offers a common structure for engaging faculty in meaningful dialogue about assessing learning and enhancing educational effectiveness. Simultaneously, it provides faculty with the flexibility essential for developing and sustaining effective, program-specific assessment and evaluation plans. Insights gained serve to enhance faculty's ability to foster student development, inform instructional and curricular development, and ensure performance standards at levels appropriate for an elite research university.

Table 1 summarizes the relationships between two of the three themes addressed in our [Institutional Proposal](#)¹ and [Capacity and Preparatory Review Report](#)² and the focal points for our learning and teaching assessment efforts. The two themes, which focus primarily on undergraduate education, provide examples of how UCLA engages faculty and students in the evaluation of educational effectiveness.

Table 1. Linking UCLA's Educational Effectiveness Themes and Assessment Framework

Theme	Focus on Students	Focus on Courses	Focus on Programs
Engaging Undergraduate Students in Capstone Experiences	Evaluating students' capstone products and providing feedback. ----- Collecting and analyzing data on students' capstone experiences.	Constructing new course evaluations tailored to specific capstone courses.	Establishing and assessing learning outcomes associated with capstone experiences.
Using Educational Technology to Enhance Learning and Teaching	Collecting and analyzing data on students' uses and perceptions of educational technology as well as their skill and comfort levels.	Improving teaching and learning through blended instruction in lower division courses.	Introducing and assessing information literacy associated with freshman cluster instruction.

In this integrative essay, we address each focal point of our assessment framework broadly and provide examples of our efforts to evaluate the effectiveness of UCLA's educational programs using evidence from student surveys, class evaluations, and program review assessments. We also

discuss plans for incorporating the assessment of learning outcomes in the Academic Senate Program Reviews. In the essays that follow (*Essay C* and *Essay D*), we elaborate on key components of our framework as they relate to each of our educational effectiveness themes, describe progress toward achieving key goals, and detail future plans.

Focus on Students: Evaluating Performance and Understanding Perspectives

At the undergraduate level, we recognize that students' scholarly identities are often just beginning to emerge. UCLA is fortunate to have many outstanding teachers who are committed to facilitating students' development as engaged learners and to enhancing effectiveness in undergraduate education. Like their counterparts at many other universities though, UCLA faculty have traditionally tended to talk very little with each other, or with their students, about learning and teaching. Today, however, our faculty is engaging in new dialogue about pedagogical priorities and practices. Together, they are establishing learning outcomes for their academic programs, communicating those expectations to students, developing plans for evaluating student performance, and considering how to use assessment findings to support curricular enrichment.

Through this work, the faculty is creating an enriched climate for learning and teaching that is student focused and outcomes based. As an academic community, we are building a broader and more explicit commitment to a process of inquiry and reflection that focuses on growth, renewal, and continuous improvement. As detailed in *Essay C* and *Essay D* of this report, we have worked to promote students' engagement as active learners via capstone experiences and through interactive technology within selected courses and programs. We have also developed long-term plans for assisting departments and interdepartmental programs in their efforts to evaluate student performance and to use those findings to enhance undergraduate learning and teaching.

UCLA's focus on students is also evident in our commitment to understanding the undergraduate experience. The campus regularly administers national surveys such as the Cooperative Institutional Research Program (CIRP) Freshman Survey conducted by UCLA's Higher Education Research Institute and queries other entering students via the UCLA Transfer Student Survey. We also participate in the University of California Undergraduate Experience Survey (UCUES), a census, online survey sent to all University of California undergraduates that has the designation of being the country's only longitudinal study of the student experience at research universities. In some fields, additional experiential feedback is obtained from students in various training programs, as well as through senior exit interviews and other approaches.

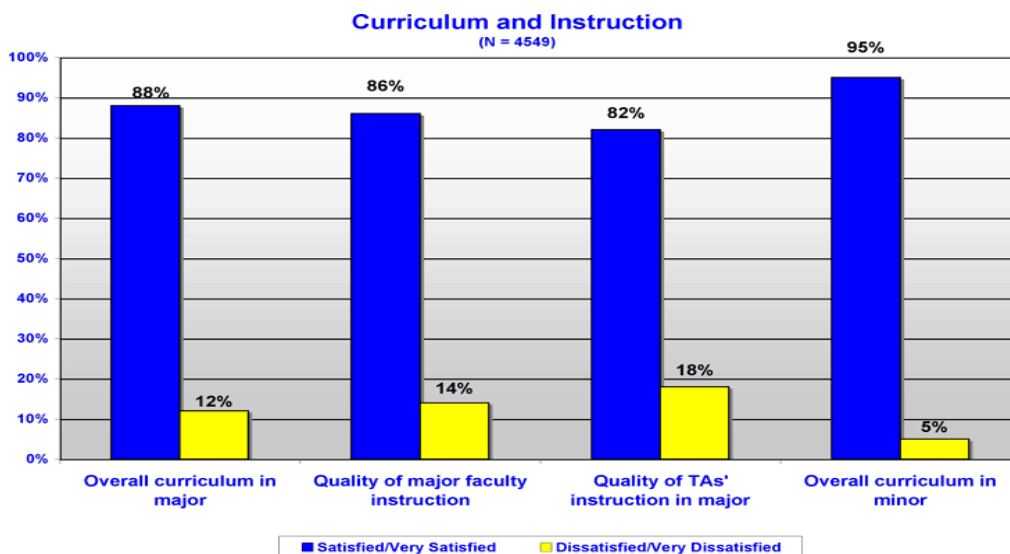
One key component of this enterprise on campus is UCLA's Senior Survey, which started in the College of Letters and Science. In 2005, Center for Educational Assessment (CEA) staff, working with the Vice Provost for Undergraduate Education, the Vice Chancellor-Student Affairs, the Associate Vice Chancellor for Alumni Affairs, and faculty representatives of the Undergraduate Council and College Faculty Executive Committee developed the survey to help the campus understand students' perspectives on academic experiences, views on campus life, and post-graduate plans. Administered annually since 2006, the web-based survey provides vital information for Undergraduate Council's review of undergraduate programs.

Over the last four years, 60% to 70% of College seniors have completed the survey, and the CEA posts an [annual report](#)³ of the results and disseminates detailed reports to department chairs, divisional deans, and Undergraduate Council. [Sample reports](#)⁴ provided to department chairs are posted. Departments use the findings as a measure of student satisfaction with the curriculum, as well as the quality of instruction and academic advising, and these data are addressed in their self-

review reports for the Academic Senate Program Review. The Senior Survey was recently adapted by the School of the Arts and Architecture and the School of Theater, Film and Television and is now given to their graduating senior students. Summaries of these data have not yet been posted.

One area of particular interest to Undergraduate Council is student satisfaction with the quality of education in the major and minor. Most respondents indicate they are “satisfied” or “very satisfied” with the academic challenge they experience within their majors (90%) and minors (94%). As illustrated in Figure 1, contentment with the overall curriculum and the quality of instruction is also high. In a few majors, ratings on these items are substantially lower than the norm. In one case, Business Economics, below-average student satisfaction levels led to a study of student opinion by an outside firm and to the formation of a faculty committee to consider updating the curriculum.

Figure 1. Sample Summary Data from the 2008 College Senior Survey



The Senior Survey Committee has collaborated with WASC theme workgroups to include questions related to their specific interests. In 2006, for example, the Senior Survey included questions on educational technology. Responses helped the Faculty Committee on Educational Technology understand students’ views on how educational technology affects their learning. These findings are presented in *Essay D*. In 2007, new questions about students’ views of their advanced seminar, internship, independent study, and honors thesis experiences were included. Resulting data, discussed in *Essay C*, facilitated the Capstone Workgroup’s understanding of the range of integrative learning possibilities in the College’s four divisions. Findings also underscored the potentially powerful effects that these types of academic experiences can have on student learning.

Focus on Courses: Evaluating Teaching and Learning

At UCLA, the Evaluation of Instruction Program (EIP)⁵ in the Office of Instructional Development helps faculty assess and improve teaching by providing instructor evaluation services. At the end of each academic term, faculty members solicit anonymous written evaluations from students enrolled in their classes. Annually, EIP distributes, collects, and processes more than 300,000 forms for over 100 departments and programs.

The standard [evaluation form](#)⁶ is designed in consultation with faculty committees and assessment experts, and incorporates recommendations from surveys of UCLA faculty and students. While most departments use the standard form, a few units have created their own forms that are administered by EIP. Faculty and staff, for example, have worked to develop [specific course evaluations](#)⁷ for the freshman cluster lectures and spring seminars, which are designed to assess students' perceptions of their experiences, with specific attention to the cluster goals (see also [Essay 4](#)⁸ of our *Capacity* report). Plans for developing new student evaluation forms for capstone courses are also underway.

Course evaluation results help individual faculty enhance their teaching and inform departments' curricular evaluation and improvement efforts. Departments also use teaching evaluation data as one criterion to evaluate a faculty member's instructional effectiveness. At UCLA, substantial attention is given to every faculty member's ability and achievement as a teacher, and there are numerous awards (university-wide, departmental, and student-generated) for outstanding teaching. Evaluation of teaching by students is a required element, as stated in the [UCLA CALL \(Appendix 3\)](#)⁹ and in accordance with the Legislative Assembly mandate passed on June 5, 1972:

It is essential to the evaluation of instructional quality and impact that candid, non-selected and reasonably complete student opinion on teaching effectiveness be obtained for all courses and instructors. Student opinion, in writing, should be regularly solicited for all course offerings, and each Department or School should devise its own procedures to this end. Reasonable uniformity and consistency in procedures within each department should be maintained, but it is recognized that differences in subject matter and methodology between departments make it unreasonable to specify a campus-wide format.

In the interest of enhancing flexibility, efficiency, and cost effectiveness, the Office of Instructional Development is currently researching options for transitioning to online course evaluations. UCLA's Undergraduate Council has been cautiously optimistic about the relative advantages of online course evaluation systems. Key considerations include maintaining procedural consistency and ensuring continued high response rates.

Focus on Programs: Evaluating Learning and Performance Indicators

UCLA has long embraced the practice of using assessment data to facilitate improvement in teaching, research, and service. As elaborated in [Essay 2](#)¹⁰ of our *Capacity* report, we also have a long-standing, rigorous Academic Program Review process. At the undergraduate level, however, there have been no common expectations for articulating or assessing learning outcomes. To address that concern, all undergraduate degree granting programs at UCLA now must establish learning outcomes and develop corresponding assessment plans. Within the changed fiscal environment, UCLA has been challenged to reexamine core elements of all academic programs and, in a few units, faculty are beginning to use the process of articulating learning outcomes to help frame discussions about the nature of the revised curriculum.

Undergraduate Degree-Granting Programs

At UCLA, we have adopted two approaches to working with departments and programs to define learning outcomes for our 125 undergraduate degree-granting programs; one is focused on capstone majors and the other on non-capstone majors. We summarize both approaches in the following sections and they are explained in greater detail in UCLA's [Guidelines for Developing and Assessing Student Learning Outcomes for Undergraduate Majors](#)¹¹, a working document we view as playing a critical role in facilitating the faculty's learning outcomes assessment efforts.

Capstone Majors. For degree-granting programs certified as Capstone Majors (see *Essay C*), learning outcomes focus specifically on capstone experiences that encompass key expectations for learning within the program’s curriculum. As such, evaluating students’ capstone performances provides direct evidence of the degree to which students are achieving expected program outcomes. To illustrate this, learning outcomes for two Capstone Majors are listed in Table 2.

Table 2. Learning Outcomes for Two Capstone Majors in Ecology and Evolutionary Biology

Degrees	Learning Outcomes for the Capstone
<p>Department: Ecology and Evolutionary Biology</p> <p>Capstone Majors: Ecology, Behavior, and Evolution (B.S.) Marine Biology (B.S.)</p>	<p>Brief capstone description: Field research with paper. Students apply theory and technique learned in their own independent projects. The main purpose of the capstone is to provide a field experience that involves designing and completing a research project, and writing a research paper.</p> <p>Students are expected to:</p> <ul style="list-style-type: none"> • demonstrate broad-based knowledge of the fundamentals acquired through coursework, including general knowledge and developing skills in library research, interpreting data, synthesis, and scientific writing. • utilize the current primary scientific literature, including searching databases, identifying appropriate sources, and reading and understanding papers. • use knowledge gained in classroom and during discussions to conceive and execute their own project. • communicate original scientific work to colleagues and mentors in oral and written form. • exhibit strong teamwork and problem solving skills.

The assessment of student learning outcomes for capstone majors will revolve around students’ final products (e.g., performance, project, paper, etc.). Once achievement levels for each learning outcome have been determined, the program faculty evaluates capstone products for evidence of student learning. Within a program, faculty may decide to review all capstone products from a particular cohort (such as the class of 2012). Alternatively, they may elect to review the work of random samples of students within or across cohorts; take systematic samples (e.g., every 5th student in a specific cohort); or draw purposeful samples of student work based on some pre-determined criteria (e.g., lowest, middle, and highest 10% of performers).

Non-Capstone Majors. Over the past six months, UCLA has begun to systematically help non-capstone degree-granting programs in their articulation of learning outcomes and assessment plans. Staff from the Vice Provost’s office (Undergraduate Education) are working with selective departments to pilot a modification of the “curriculum mapping technique” used by our engineering faculty in their ABET accreditation (see [Electrical Engineering](#)¹²). Using this approach, the faculty identifies core courses that align with stated learning outcomes. Not all courses need to be listed; this is a key modification of engineering’s approach. Checking the alignment between a program’s core offerings and expected learning outcomes is an important part of the process for clarifying *what* and *how* students are learning. Table 3 portrays a hypothetical example of the type of matrix faculty are developing for each non-capstone major to illustrate how individual courses are related to program learning outcomes.

Once learning outcomes are “mapped” to core courses, the faculty decides what materials (e.g., copies of exams, reports, term papers, etc.) will be sampled and stored for program assessment purposes within the department’s portfolio. Hypothetical assessment methods are provided in Section C of Table 3. Emphasis is placed on *direct* evidence of student learning; however, *indirect* evidence from student course evaluations and surveys described in the “Focus on Students” section of this essay provides valuable complementary assessment information.

Table 3. Hypothetical Curriculum Map with Assessment Ideas for a Non-capstone Major

A. Learning Outcomes for the Hypothetical “General Science” Major				
Students completing the “General Science” major will be able to:				
1. master broad knowledge concerning fundamentals in the basic areas of the discipline.				
2. solve problems by identifying the essential parts of a problem and formulating a strategy for solving the problem.				
3. understand the objective of scientific experiments, properly carry out the experiments, and appropriately record and analyze the results.				
4. communicate laboratory experiment concepts and results through effective written and oral skills.				
B. Curriculum Map for the Hypothetical “General Science” Major (L=low emphasis; M=moderate; H=high)				
Required Core Courses for the Major	Learning Outcome #1	Learning Outcome #2	Learning Outcome #3	Learning Outcome #4
GenSci A	L	H		
GenSci B	L		M	H
GenSci C	M	L	H	
GenSci D	H			M
GenSci E lab	L	M	H	
GenSci F lab				H
C. Evaluation Methods for the Hypothetical “General Science” Major Learning Outcomes				
<u>Learning Outcomes</u>	<u>Assessment Methods</u>			
1	A random sample of GenSci C or D final exams will be evaluated for content knowledge.			
2	A random sample of problem solving questions in GenSci A will be evaluated.			
3	A random sample of laboratory reports in GenSci E will be evaluated.			
4	A random sample of laboratory reports in GenSci B or F will be evaluated.			

Learning Outcomes and Assessment Framework in Exhibit 7.1. To date, our faculty has completed the *Educational Effectiveness Inventory Indicators* for certified and proposed Capstone Majors (see Appendix 5, [Exhibit 7.1A](#)¹³). The Capstone Workgroup and Undergraduate Council decided to provide more detail than requested by WASC so as to encourage faculty to be specific about learning outcomes and assessment procedures. A sample of UCLA’s expanded Exhibit 7.1 for Music History, an inaugural Capstone Major, is illustrated in Table 4. Learning outcomes, established by the faculty, are listed in column (2). Bulleted statements in columns (4) and (5) illustrate key procedures that will frame the department’s assessment. These procedures incorporate the focal points discussed in this essay; that is, assessments include a focus on student performance, individual courses, and the curriculum. If majors are accredited by a professional organization, an additional process has been added (see Engineering majors in Exhibit 7.1A).

A timetable for completing inventories for new Capstone Majors and non-capstone majors is presented in [Exhibit 7.1B](#)¹⁴. For each of the next three years, inventories for an additional 25-30 programs will be completed and posted. The timetable is closely tied to the Academic Senate’s Program Review schedule, which is discussed in a subsequent section of this essay (see “Program Reviews and the Assessment of Learning Outcomes”). The three-year schedule is paced to ensure that Undergraduate Council has adequate time to establish clear and meaningful guidelines for non-capstone majors and to encourage departments to develop learning outcomes and assessment plans that will help guide the review of their undergraduate programs. Departments will also be encouraged to publish learning outcomes in the *UCLA General Catalog* (see [Catalog entries](#)¹⁵) and on websites (see [website posting](#)¹⁶ from the Department of Materials Science and Engineering).

Table 4. Sample of UCLA’s Modification of WASC Exhibit 7.1 - *Inventory of Educational Effectiveness Indicators for a Capstone Major*

Academic Program	(1) Have formal learning outcomes been developed?	(2) What are the learning outcomes? Where are they published? (Please specify)	(3) Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(4) Who interprets the evidence? What is the process?	(5) How are the findings used?	(6) Date of last Academic Senate review?
<p>Department: Musicology</p> <p>Capstone Major: Music History B.A.</p>	<p>Yes</p>	<p>Students completing the capstone should be able to:</p> <ul style="list-style-type: none"> • demonstrate, within the context of a specialized topic in music history, specific skills and expertise acquired in earlier coursework, including research, analysis, writing, and general knowledge of music and music history. • identify and analyze appropriate primary sources and musical scores. • acquire a working knowledge of scholarly discourse relative to a specialized topic. • conceive and execute a project that identifies and engages with a problem within a specialized topic. • engage with a community of scholars, presenting one’s own work to peers and helping to further the work of those peers through discussion and critique. <p>Learning outcomes published:</p> <ul style="list-style-type: none"> • in general catalog (for 2010) • in course syllabi 	<p>Capstone: 2-course sequence: MH 191T and MH 190 and Senior Thesis</p> <p>Capstone description: Students not pursuing departmental honors must complete a senior thesis. During their senior year, students take a capstone seminar (MH 191T) in which they formulate their thesis. In addition, they must enroll in a colloquium (MH 190) that brings together students taking supervised tutorial research. Students are expected to present their work and to discuss and help critique the work of their peers.</p>	<ul style="list-style-type: none"> • Instructor evaluates and grades each student’s capstone thesis as well as his/her performance within the capstone course sequence, and any associated tutorials. Feedback on each is provided to the student. Students are also invited to submit their capstone project for the Herb Alpert Prize. • Student reflects on capstone experience and provides feedback via course evaluation and UCLA Senior Survey. • Departmental subcommittee reviews all capstones as part of the department’s self review. • Internal and external reviewers provide feedback regarding the overall quality of the program and the capstone experience as part of Academic Senate review. 	<ul style="list-style-type: none"> • To foster students’ academic, personal, and professional development. • To inform faculty members’ course development and teaching methods and to inform personnel evaluations for faculty merit and promotion. • To assess whether departmental learning outcomes are being met, to ensure continuity of performance standards, and to inform curriculum development. • To determine whether program quality and student performance are appropriate for an elite research university. 	<p>2003-2004</p>

Graduate Degree-Granting Programs

Graduate education at UCLA is central to the University’s mission. As a top-tier research institution, our graduate students often serve as instructors and mentors to undergraduates and as colleagues-in-training to the faculty. Although their scholarly endeavors are well defined at the graduate level, graduate students require faculty time and input at all stages of their graduate careers. They greatly influence the quality of the undergraduate experience and supplement the instructional expectations of the faculty. Masters theses and doctoral dissertations define the capstone for graduate students, but it is the ongoing collaborations with faculty and the hands-on interactions with the undergraduates that further enhance the graduate student experience.

The Graduate Division has long provided students with clear expectations about the Master’s Thesis and Doctoral Dissertation. Published in the [Standards and Procedures for Graduate Study at UCLA](#)¹⁷, criteria for these works serve as common outcome measures for UCLA’s graduate degree-granting programs. For example, faculty and students are notified that:

Every doctoral program requires the completion of an approved dissertation that demonstrates the student’s ability to perform original, independent research and constitutes a distinct contribution to knowledge in the principal field of study. The choice of subject must be approved by the doctoral committee. [Standards page 13]

Because common standards are published, Graduate Council opted to create a modified version of the *Educational Effectiveness Inventory Indicators*, illustrated in Table 5. Here, the first two columns of the original Exhibit 7.1 are merged. A ‘yes’ in the condensed column indicates that the department adheres to the *Standards* guidelines. In this example, the Department of English indicates that their Master’s thesis, qualifying exams, and Ph.D. dissertation follow the published guidelines.

Table 5. UCLA’s Modified *Educational Effectiveness Inventory Indicators* for Graduate Programs

Academic Programs	Columns (1 & 2) Does the faculty endorse the learning outcomes and program guidelines established by the Graduate Council for the Graduate Degrees?	Column (3) What “evidence” (thesis or exam and/or dissertation, or licensure examination) is used to determine that graduates have achieved stated outcomes for the degree?	Columns (4 & 5) Does the document follow the guidelines for assessment and evaluation?	Column (6) Date of last Academic Senate review?
English • Masters • Candidate in Philosophy • Doctorate	Yes	<ul style="list-style-type: none"> • Thesis or Exam • Qualifying Exam • Dissertation 	Yes	2008-09

The modified inventory also merges columns (4) and (5), which provide information about the assessment process. A ‘yes’ in the combined column indicates the department or program adheres to UCLA’s four- or five-step process, which begins with a committee assessment of the dissertation and ends with the program review (step 4) or professional accreditation (step 5). The assessment steps, similar to those outlined for UCLA’s undergraduate programs, are discussed in this essay and summarized in Table 4.

The inventories for all of UCLA’s 103 Masters degree-granting programs (M.A., M.S., Professional) and 88 Doctoral degree-granting programs are posted online and constitute Appendix 5, [Exhibit 7.1C – Graduate Programs](#)¹⁸, of this report. For UCLA’s graduate and professional programs that are also accredited by professional organizations, we have posted the *Inventory of*

Concurrent Accreditation and Key Performance Indicators (see Appendix 5, [Exhibit 8.1](#)¹⁹). Table 6 shows the inventory entry for UCLA’s School of Law.

Table 6. An Excerpt from UCLA’s Exhibit 8.1-Inventory of Concurrent Accreditation

Columns (1) and (2). Professional accreditations currently held and date of most recent accreditation.	Column (3). Summary key issues for continuing institutional attention identified in accreditation action letter or report.	Column (4). Key performance indicators required by agency or selected by program (licensure, bar pass rates; employment rates, etc.).	Column (5). For at least one indicator, provide up to 3 years of data (if available).
School of Law			
Last joint ABA-AALS re-inspection site visit occurred on Feb 24-27, 2002.	The ABA found that the UCLA School of Law is in compliance with the ABA Standards for Compliance and remains on the list of law schools approved by the ABA.	1) Bar Passage Rate (first time takers, July Bar) 2) Employment rate for those seeking employment (9 months after graduation as reported to NALP)	85.9% (2006-07) 88.5% (2007-08) 99.4% (2006-07) 99.1% (2007-08)

Program Reviews and the Assessment of Learning Outcomes

From the earliest discussions of UCLA’s current WASC reaccreditation, steering groups have discussed how program reviews conducted by the Academic Senate might support the requirement set by WASC that all degree-granting programs establish learning outcomes and methods of assessment. As noted in the previous section, our graduate degree-granting programs have had published outcomes for some time. These outcomes are assessed every time the department or Graduate Division approves a thesis or dissertation. In their graduate program self-review reports, departments and programs also typically outline their students’ achievements.

At the undergraduate level, there have been no common expectations for the articulation of learning outcomes or their assessment. The Undergraduate Council sought to rectify this in Fall 2008 by revising its program review guidelines. The primary change was to require that the self-review reports include program-level student learning outcomes, a summary of the faculty’s efforts to evaluate the achievement of learning outcomes, and discussion of any changes implemented as a result of the assessment process. In Spring 2009, the Undergraduate Council and the Graduate Council approved new guidelines for the review of undergraduate programs:

D. Undergraduate Programs (for full description see the [Guidelines](#)²⁰)

Provide an overview of the goals, rationale, structure, and effectiveness of your undergraduate educational programs, providing evidence and support as appropriate. Included should be the articulated learning objectives for each of your major and minor programs, indicating any changes introduced since the last program review or certification/accreditation. For designated capstone majors, the learning objectives provided should be those developed within the context of the capstone course(s). Discuss efforts made to evaluate achievement of those learning objectives either across the curriculum or among your graduating seniors. Describe any changes you have implemented in your program as a result of that evaluation.

These new guidelines were developed as a result of several discussions held during the 2008-09 academic year between the leadership of the Graduate Council and Undergraduate Council. During these discussions, three points of concern emerged:

1. *Approving a timetable for implementing the new guidelines.* Councils were concerned that the faculty needed time and assistance to properly develop learning outcomes and assessment plans. In response to this concern, Undergraduate Council voted to “implement the new guidelines over a three-year period, beginning with departments

scheduled to write their self-reviews in 2010. In that year, departments will be asked only to articulate their learning outcomes for undergraduate programs. Programs writing their self-reviews in 2011 will be asked both to list their learning outcomes and to describe their assessment plans. Beginning in 2012, departments will be asked to articulate learning outcomes, summarize their assessment efforts and, as applicable, discuss changes implemented as a result of each program's assessment process."

2. *Helping faculty implement the new guidelines.* Both Councils underscored the importance of providing the faculty in units scheduled for review with assistance from other faculty and staff who have had experience with educational assessment. They also raised concern about how faculty would "implement an assessment plan in the environment of diminishing resources." In response, the Vice Provost (Undergraduate Education) explained that two units in the Division of Undergraduate Education—the Center for Educational Assessment and the Office of Instructional Development—have been assisting faculty in developing evaluation plans, including updating course evaluations and adding program-specific questions to the UCLA Senior Survey. Also, Dr. Jennifer Lindholm—Special Assistant to the Vice Provost—has been helping faculty develop learning outcomes for capstone and non-capstone majors. Currently, resources for these programs and staff are secure. Lastly, OID's Instructional Improvement Grants can be a future source of funding for units interested in funding graduate students to help the faculty pilot assessment programs.
3. *Setting expectations for the role of assessment in UCLA's Program Review.* In their review of the final draft of this essay, both Councils expressed concern about the impact of assessments on the Program Review Process. Councils worried that an "intense focus on undergraduate learning assessments and outcomes and their connection to Program Review will take over the process" and "have collateral effects on reviews of graduate programs across our campus." These issues and others will be the focus of discussions in the coming months.

As the faculty begins to implement the new guidelines during the next few years, it is clear that the two Councils will be concerned and actively involved in setting helpful guidelines, making certain that faculty receive timely assistance, and framing an appropriate role for the assessment processes in UCLA's Program Reviews for which they are responsible.

Reflections on an Evolving Process

As defined by a recent draft [report](#)²¹ from the UC-wide Undergraduate Educational Effectiveness Task Force, "assessment is an on-going three-stage process that identifies learning goals (outcomes), measures students' mastery of the goals, and uses the results to improve instructional programs, as well as refine learning goals." Critical stages of this closed-loop process are consistent with WASC's directive to "invite sustained engagement" and to "create a feedback loop" designed to account for and enhance educational effectiveness. The work described in this essay on *UCLA's Approaches to Evaluating Educational Effectiveness* will continue to be time-intensive and challenging, especially so within the context of UCLA's new fiscal realities.

UCLA remains strongly committed to academic excellence (*Essay A*); this is reflected in the evolving efforts of a growing cadre to embrace new undergraduate education initiatives, including engaging undergraduate students in capstone experiences (*Essay C*) and using educational technology to enhance teaching and learning (*Essay D*).

ESSAY C

UCLA's Capstone Initiative: Engaging Students in Creative Discovery

Background

UCLA's [Institutional Proposal](#)¹ to WASC envisions the Capstone Initiative as a bookend to the successful transformation of the General Education program that was the curricular focus of UCLA's last reaccreditation. Whereas general education offers beginning students foundational knowledge across a breadth of fields, capstones serve as culminating experiences that challenge advanced students to apply their acquired general and disciplinary-based knowledge and skills to a project grounded in a focused course of study. These projects demonstrate core competencies, and engage students' individual creativity, research ability, artistic or critical proficiency, and personal reflection. Additional skills and knowledge resulting from capstone experiences encourage students to embark on longer-term pathways of academic and personal discovery.

In parallel to its decade-long transformation of general education, UCLA is now in the process of engaging interested departments in discussions about implementing capstones within their undergraduate majors. The long-term goal is to broaden substantially the availability of undergraduate capstone experiences by UCLA's centennial in 2019. We are encouraged by the WASC Site Visit Team's confidence that "given UCLA's success in General Education, the results of the work on capstones could well become a national model." In its [report](#)², the team noted:

The development of the Capstone Initiative has been a very thoughtful process that has engaged faculty from across the divisions and Schools. By beginning with existing academic processes (i.e. senior seminars and honors theses) and respecting their roles in individual programs as well as the variation that exists across broad disciplinary approaches, UCLA has developed standards for capstone experiences that are substantive, broadly applicable and consistent with high faculty ownership across the diversity of undergraduate programs.

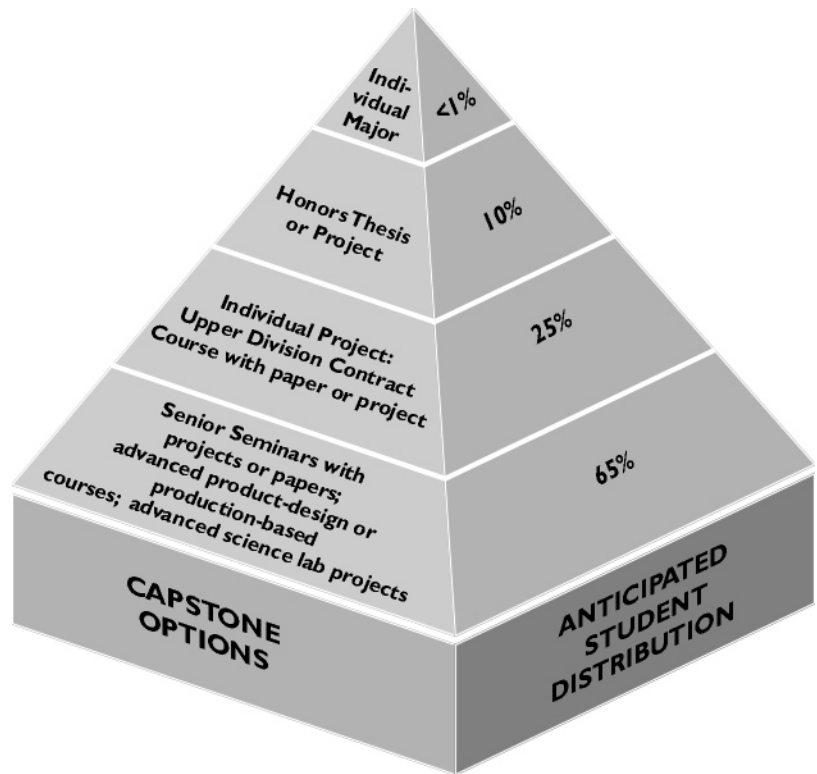
In [Essay 5](#)³ of our *Capacity* report, we proposed a model for capstones that builds on a curriculum with core requirements and a progression of electives that lead to a culminating experience. Capstone options also build on the success of existing experiences and allow for broad applicability across our diverse programs. In that essay, prepared by a cross-disciplinary group of deans, current and former department chairs, and current and former leaders of the Undergraduate Council, we identified five criteria for UCLA capstone experiences:

1. The project must require the student to engage in a creative, inquiry-based learning experience that deepens the student's knowledge and integration of the discipline.
2. The project may be completed individually or by a group of peers, provided each student is given agency; each student's contribution must be significant, identifiable, and graded.
3. The project must culminate in a tangible product that can be archived (including film, video, etc.) for at least three years by the responsible unit (department or program).
4. The project must be part of an upper-division course of at least four units, usually within the curriculum established for the student's major or minor.
5. Opportunities should be provided for capstones to be shared within a broader community, such as presenting a paper at a student or professional meeting.

These criteria were endorsed unanimously and "with enthusiasm" by the Undergraduate Council in Fall 2007, along with the four levels of capstone options illustrated in Figure 1. The four levels represent different expectations for student engagement and independence, ranging from advanced senior seminars or project courses that require a comprehensive term paper, performance, or product design, to individually designed majors. The percentages listed indicate the expected

participation of seniors at each of the four levels. It should be noted that some students might complete capstones at more than one level; for example, a student, having completed an advanced seminar, might decide to engage in an independent study or honors project.

Figure 1. UCLA’s Capstone Options by Level and Anticipated Rates of Student Participation



In this essay, we update our Capstone Initiative efforts and discuss future plans. In doing so, we discuss the: 1) Workgroup’s identification and survey of UCLA’s inaugural Capstone Majors; 2) Undergraduate Council’s implementation of a process for certifying Capstone Majors; 3) College’s analysis of Senior Survey data about capstone experiences; 4) campus plans for, and progress in, responding to departmental interest in the Initiative; and 5) timeline for establishing a process for assessing capstone experiences (also see *Essay B*). The decision to align the Capstone Initiative with having the faculty articulate learning outcomes and then consider the assessment framework, which was discussed in *Essay B*, has aided the process of setting standards for UCLA capstones and establishing a capstone certification process. Capstones bring into focus programmatic outcomes for the major, and the assessment of students’ capstone performances serves as an effective diagnostic tool to facilitate the curricular review and reform process.

Identification and Survey of UCLA’s Inaugural Capstone Majors

With approval of the capstone criteria in hand, the Workgroup reviewed course requirements for all UCLA undergraduate majors to identify those that already appeared to require a course (or sequence) meeting the approved criteria. By first focusing on these selected majors and surveying them rather than all programs (the original plan per *Essay 5* in our *Capacity* report), the Workgroup established a solid foundation for future efforts by:

- providing thorough documentation of how existing capstones are designed and sustained, as a foundation for expanding opportunities across campus;

- assisting the development of standards and overall process for certifying Capstone Majors by the Undergraduate Council; and
- establishing carefully and explicitly the relationship between capstones and larger programmatic goals, expressed as learning outcomes.

In Winter 2008, educational researchers and administrative staff from the office of the Vice Provost for Undergraduate Education, in collaboration with Workgroup leaders, developed a list of 38 degree-granting programs that appeared to require a capstone for undergraduates. The Workgroup then developed a Capstone Survey that, along with the list of 38 programs, was reviewed and approved by the Undergraduate Council on March 7, 2008. Later that month, the survey and a cover letter, co-signed by the chairs of the Capstone Workgroup and the Undergraduate Council, were distributed. The [letter](#)⁴ invited departments to apply for their identified major(s) to be included among the inaugural set of “Capstone Majors.” Toward that end, the [survey](#)⁵ asked them to verify the description of their requirement and confirm that it satisfied the five criteria specified by the UCLA Capstone Model, explain the “goals for students undertaking capstones,” and describe procedures for “evaluating capstone courses and experiences.”

Table 1 summarizes program responses. Of the 38 programs surveyed, 29 completed the application by October 2008 (column B); the remaining nine programs expressed commitment to complete their applications within the 2008-09 academic year (column C). As a group, these 38 majors constitute 30% of UCLA’s 125 baccalaureate degree programs (columns D and E).

Table 1. Summary of 2008 Capstone Survey Responses by Academic Unit

UCLA’s units offering bachelor’s degrees: College Divisions, Institutes, Schools, and Special Programs	A. Degree-granting programs surveyed by Workgroup	B. Applications completed and approved by Workgroup October 2008	C. Programs committed to complete application by end of 2008-09	D. Total degree-granting programs in each academic unit	E. % of Total surveyed [A/D x 100]
Arts and Architecture	4	2	2	7	57%
Engineering	9	9	0	9	100%
Honors “Individual Major”	0	0	0	1	0%
Humanities Division	8	8	0	47	17%
Institute of the Environment	1	1	0	1	100%
International Institute	4	1	3	7	57%
Life Sciences Division	4	4	0	11	36%
Nursing	0	0	0	1	0%
Physical Sciences Division	4	4	0	23	17%
Social Sciences Division	2	0	2	16	13%
Theater, Film, and TV	2	0	2	2	100%
Total	38	29	9	125	30%

Beginning in Summer 2008 and continuing through 2008-09, a small team of Council and Workgroup faculty members, along with staff from the Vice Provost’s office, assisted faculty in completing the application, giving particular emphasis to the articulation of capstone learning outcomes and their assessment. As part of the capstone application, faculty also completed an *Inventory of Educational Effectiveness Indicators* (see Table 4 of *Essay B*).

Certification of the Inaugural Capstone Majors

The Workgroup met on October 14, 2008 to review the first set of completed capstone applications. Individual members were assigned to review and comment on those most closely related to their field of expertise. At the conclusion of the meeting, the Workgroup had approved 29 applications for Council review and certification. On October 17, the Workgroup Chair met with Undergraduate Council to present the slate of applications, a [letter](#)⁶ summarizing the Workgroup's actions, and complete sets of the application materials for all members. [Samples](#)⁷ of completed capstone applications were also posted and updated as certification progressed.

At Council, a general discussion led to the decision that the Workgroup also should request a memo from each chair detailing the involvement of the faculty in reviewing and endorsing the application, including the learning outcomes. These letters were to be added to the program's application before Council's Curriculum Committee reviewed it.

To obtain these memos, an [email](#)⁸ was sent to chairs. Some responded immediately; others waited until a full meeting of the faculty could be scheduled. The received letters indicated a high level of faculty involvement in the process, and many provided important insights into the process of engaging faculty in discussion of a capstone requirement. Some described the capstone as already an important program component and expressed faculty pride in students' accomplishments and the inclusion of their program as one of UCLA's inaugural Capstone Majors:

Capstones, in the form of design courses that integrate foundation material in the majors, are a longstanding feature of our engineering programs.... Since our existing curricular structure appears to satisfy the criteria for a capstone major, we [are] pleased to become a part of the Capstone Initiative. [Henry Samueli School of Engineering and Applied Sciences]

Our capstone course was develop[ed] about five years ago as part of our major.... The faculty were unanimous in endorsing the course and, in fact, we managed to get some more support in the form of offering to help supervise student projects...[and]...some constructive and supportive comments and discussion. [Statistics]

The department...is indeed pleased to present a proposal, according to which its undergraduate majors would officially become Capstone Majors....Our department already requires a junior/senior seminar (Classics 191) of all majors, the basic purpose of which is congruent with the intentions of the Capstone requirement. [Classics]

Memos from other chairs detailed the processes by which capstone experiences and the curricula that support them have "evolved," and continue to be "fine tuned." A common point of emphasis was that "the faculty worked hard at defining the capstone experiences" through a collaborative process over several years. Multiple goals of capstones were articulated, including "allow[ing] the student to integrate his/her learning in a unique and meaningful way" and seeking to make capstones "practical" and "sustainable." In a few cases, the value of "developing several emphases with capstones so our students [are] better prepared for more varied careers" was also underscored:

...the issue of capstones has been discussed at faculty meetings at least three times each quarter....It has taken three years to develop and integrate the capstone requirement into our curriculum... [Ethnomusicology]

Our department has always required upper-division seminars of both its majors and minors, and in the past few years we have paid particular attention to redesigning this experience, for our majors, as a capstone, with a more substantial product and a more directed aim that it culminates our program. [Musicology]

In a few departments, such as History and English, required upper division seminars have been taught for many years with the understanding that students "should write a serious research paper."

The Capstone Major application process, however, engaged faculty in new dialogue about recasting the major and the role of the upper division seminar requirement:

Since [the] 191[seminar] was already functioning in many ways as a capstone course for the History major, the task of changing it into a capstone has been mainly one of making explicit the goals and requirements. We talked generally [in two departmental meetings] about restructuring the major to encourage students to develop programs of courses that build on one another. The department [also] discussed the proposed learning outcomes and procedures for keeping a...sample of papers as a basis for evaluating the seminars. I think everyone regarded them as formalization of what we were already doing rather than starting a new program, and the capstone proposal seemed to have unanimous assent. [History]

The chairs' memos were reviewed by the Workgroup chair and then sent to the Curriculum Committee, which began its review. Because several members were new to Council and unfamiliar with the history of UCLA's Capstone Initiative, the Committee initially spent time reviewing the capstone model and criteria, as well as the process by which the Capstone Workgroup selected and surveyed the 38 departments. These discussions led to lively interactions between the Committee and the Workgroup.

In the course of their review, the Co-Chairs of the Curriculum Committee provided periodic updates to Council, expressing support for the initiative while communicating key issues that were raised in Committee discussions. These included:

1. Are there capstone prerequisites that prepared students for the experience?
2. Are learning outcomes consistent with the nature of the capstone experience?
3. Are students required to present their projects in class or to a broader audience?

The Committee and Workgroup differed on the last question. The Workgroup had treated the fifth criterion (i.e., "Opportunities should be provided for capstones to be shared within a broader community...") as aspirational; this point had been explicitly raised earlier when the proposal was submitted to the Undergraduate Council for endorsement. The Committee, however, felt student presentation of capstone projects was key to the experience and requested assurance that programs applying for capstone certification would satisfy this criterion. The Committee's concern led eventually to a rewording of the fifth capstone criterion, which was approved by Council:

Opportunities must be available or developed for students to share their capstone products (paper, performance, or project) publicly. Examples might be a presentation to a peer audience such as a class, a departmental mini-conference, or a research group meeting; a poster at a department or campus venue or professional meeting; campus music, dance, theater or art event; or a competition that is judged by the professional community in the discipline.

The Curriculum Committee's systematic review of the capstone applications took place over a series of meetings and, on February 20, 2009, the Committee presented a slate of 18 majors for capstone certification. Council unanimously approved the slate and, in the ensuing months, Council certified 10 more majors. By the end of Fall 2009, 28 of the 38 programs originally invited to submit applications had been certified as Capstone Majors. The certification process and timeline for each major is posted in an online [chart](#)⁹ that is maintained by the Workgroup in collaboration with Undergraduate Council.

Table 2 lists the inaugural Capstone Majors, 28 of which are now certified. Applications from eight more are still in various stages of review. The final two have opted to postpone submitting capstone applications until issues raised during their recent program reviews can be satisfactorily resolved.

Table 2. UCLA's Inaugural Capstone Majors*

Departments or IDPs (Interdepartmental Programs)	36 Capstone Majors	2007-08 Degrees[^]	Brief Description of Capstone
Art	<i>Art</i>	56	Studio project
Bioengineering	<i>Bioengineering</i>	27	Product design courses with paper
Chemical & Biomolecular Engineering	<i>Chemical Engineering</i>	47	Product design courses with paper
Civil & Environmental Engineering	<i>Civil Engineering</i>	44	Product design courses with paper
Computer Science	<i>Computer Science</i>	52	Both majors: Product design courses with paper
	<i>Computer Science & Eng</i>	41	
Classics	<i>Classical Civilization</i>	13	All four majors: Seminar with paper
	<i>Greek</i>	0	
	<i>Latin</i>	6	
	<i>Greek and Latin</i>	2	
Earth and Space Sciences	<i>Geology</i>	5	Both majors: Field research with paper
	<i>Geol/Engineering Geol.</i>	6	
Ecology & Evolutionary Biology	<i>Ecol., Behavior, & Evol.</i>	17	Both majors: Field research with paper
	<i>Marine Biology</i>	22	
Economics	<i>Economics/International Area Studies</i>	34	Directed individual research with paper
Electrical Engineering	<i>Electrical Engineering</i>	107	Product design courses with paper
English	<i>English</i>	405	Both majors: Seminar with paper
	<i>American Lit. & Culture</i>	62	
Institute of the Environment	<i>Environmental Science</i>	6	Environmental team project with paper
Ethnomusicology	<i>Ethnomusicology</i>	16	Performance, composition, or research project
European Studies IDP	<i>European Studies</i>	16	Advanced seminar with paper or directed individual research with paper
Film, Television & Digital Media	<i>Film and Television</i>	33	Senior thesis project
Global Studies IDP	<i>Global Studies</i>	50	Senior seminar with thesis
History	<i>History</i>	613	Seminar with paper
Math/Atmospheric Sciences IDP	<i>Math/Atmospheric & Oceanic Science</i>	0	Directed individual research with paper
Materials Science & Eng.	<i>Materials Engineering</i>	15	Product design courses with paper
Mechanical & Aerospace Engineering	<i>Aerospace Engineering</i>	36	Both majors: Product design courses with paper
	<i>Mechanical Engineering</i>	90	
Music	<i>Music</i>	38	Senior recital or composition
Musicology	<i>Music History</i>	17	Seminar with paper
Neuroscience IDP	<i>Neuroscience</i>	95	Paper or advanced research lab
Psychology	<i>Cognitive Science</i>	22	Internship with paper or research apprenticeship with paper
Southeast Asian Studies IDP	<i>Southeast Asian Studies</i>	3	Advanced seminar with paper
Spanish and Portuguese	<i>Spanish and Community and Culture</i>	3	Civic project with paper
Statistics	<i>Statistics</i>	8	Consulting project with report
Theater	<i>Theater</i>	58	Varies by concentration area: performance, direction, or presentation of creative works
Degrees awarded in 2007-08 to students in these majors:		2,065	27% of 7,536 degrees awarded in 2007-08^{^^}

* The Undergraduate Council is expected to review the capstone applications of the highlighted majors in 2009-10.

[^] Number of 2007-08 bachelor's degrees awarded.

^{^^} A total of 7,536 degrees were awarded to 7,083 graduating seniors; 453 seniors graduated with double majors.

As noted in Table 2, the inaugural Capstone Majors awarded 2,065 degrees to graduating seniors in 2007-08, representing 27% of the total baccalaureate degrees awarded that year. As demonstrated by the brief capstone descriptions in the table, most of the inaugural Capstone Majors require students to complete seminars or project courses. Some are offered in one quarter; others span two, or even three, quarters. Some capstone experiences take students to the field to conduct research (Marine Biology) or into the community for a civic project (Spanish and Community and Culture major in the Spanish & Portuguese Department). Students in Statistics work in small groups to solve problems posed by community- or campus-based clients. Art, Music, and Ethnomusicology require (or include as one option) that students perform or show creative works. Music majors with a composition concentration, for example, must program a set of their original compositions, assemble the performers, and perform in recital.

The inaugural Capstone Majors listed in Table 2 illustrate that capstone experiences are common for students in the UCLA Professional Schools that offer baccalaureate degrees. Of the 18 degree-granting programs sponsored by these units, 15 (or 83%) have a capstone requirement. In these Schools, which educate engineers, musicians, artists, and those pursuing careers in theater and film, undergraduates are typically required to complete a project (e.g., product design, film, composition, art portfolio) that demonstrates mastery and creativity. In two Schools (Engineering; Theater, Film and Television), students in all majors are required to complete a capstone.

Capstone requirements are also relatively common in the two UCLA institutes that offer undergraduate programs: the International Institute and the Institute of the Environment. Of the eight majors offered by these institutes, five (or 63%) are Capstone Majors. Students focus on interdisciplinary studies and often are expected to engage in capstone experiences that integrate materials at an advanced undergraduate level. This typically occurs in a senior seminar or as part of a research experience.

In the College of Letters and Science, capstone requirements for graduation are comparatively less common. The College supports 106 degree-granting programs; to date, only 13 (or 12%) are certified (or pending certification) as Capstone Majors. These majors represent all four divisions and encompass degree-granting programs that have only a handful of graduating seniors (e.g., Geology or Statistics), as well as two of the most popular programs: History with over 600 graduating seniors each year, and English (application pending) with over 400 graduating seniors. Some departments (e.g. Classics) offer several majors, all of which have the same capstone requirement. More commonly, there is a mix of capstone and non-capstone majors within departments that offer more than one undergraduate major. In large departments that offer multiple majors, such as Psychology, it is typically the smaller majors that require capstones. For example, within Psychology, Capstone Major certification is pending for Cognitive Science, while General Psychology (one of the largest majors in the College) and Psychobiology have not applied.

Most programs in the inaugural group of Capstone Majors specify the same capstone experience for all students completing a degree (or specific concentration in the degree). A few offer students a choice; for example, in the Neuroscience IDP, students choose between conducting independent research in a faculty laboratory and completing an advanced laboratory course. Neuroscience fits the UCLA Capstone Model (Figure 1): about 60% of Neuroscience seniors complete the advanced lab course; 35% undertake a one- or two-quarter independent study (199); and 5% submit an honors thesis. As more units develop Capstone Majors or Capstone Programs (discussed in “Future Plans for UCLA’s Capstone Initiative”), we expect most programs will not have a single course or experience for all students; rather, we anticipate that many will adopt practices similar to Neuroscience, where students are expected to select among different levels of capstone experiences.

Experiences in the College: Senior Survey

The [College Senior Survey](#)¹⁰, administered each spring, explores students' views about their lives on campus, their studies, and their plans after graduation. In support of UCLA's Capstone Initiative, the 2008 version—which was completed by 4,555 seniors (about 60% of the graduating class within the College)—incorporated a set of questions concerning four types of courses that encourage students to integrate and apply their knowledge from prior coursework: senior seminars with comprehensive term papers, community or corporate internships, departmental honors theses, and independent study courses. In addition, the 2008 survey queried student participation in “other” unspecified types of synthesis/application coursework. Highlighted here are selected findings from those data, with more information available in the full [report](#)¹¹.

Among 2008 respondents, 45% indicated they had completed *at least one* special topics senior seminar, community or corporate internship, independent study, or departmental honors thesis. Senior seminars provided the most common opportunity for students to demonstrate their capacity to synthesize and apply previously acquired knowledge. Half or more of those who did not participate in such coursework indicated they “did not choose to” enroll; roughly 20-25% attributed their non-involvement to the fact that such an option was “not available.”

Self-reported student engagement in *at least one* senior seminar, internship, independent study, or honors thesis ranged from 25% in the Physical Sciences to 57% in the Humanities. Apart from (or in addition to) the four types of capstone courses queried in the survey, some students completed other types of integrative coursework that required them to produce a paper, video, thesis, or similar final project. Examples include graduate seminars, fieldwork, and advanced laboratory courses, most of which (75%) occurred within the student's major. In all, nearly two-thirds of respondents reported engaging *either* in senior seminars, internships, independent study courses, honors thesis work, or some “other” type of similar experience (Table 3).

Table 3. Senior Survey Respondents from the Four College Divisions Reporting Completion of One or More Selected Course Experiences (N = 2007-08 College Senior Survey Respondents)

Participated in:	Humanities N=730	Social Sciences* N=2,380	Life Sciences N=1,042	Physical Sciences N=403	All N=4,555
Senior Seminar	48%	30%	14%	9%	27%
Community or Corporate Internship	10%	17%	10%	5%	13%
Independent Study	14%	14%	21%	15%	16%
Honors Thesis	8%	5%	5%	2%	5%
At least one of above	57%	48%	38%	25%	45%
At least one of above, or “other” similar capstone class**	72%	65%	64%	52%	64%

*Includes seniors in majors sponsored through the International Institute.

**See text for description of “other” classes.

Respondents were asked to assess their experiences according to six evaluative statements, which are quoted in Table 4. Irrespective of the type of coursework they engaged in, the vast majority agreed that the experience was an “outstanding” aspect of their UCLA education. More than 90% who completed a senior seminar, independent study, or honors thesis reported the experience provided them with “strong intellectual challenges” and helped them to “better understand concepts introduced in related courses.” Similar percentages “strongly agreed” or “agreed” that, through these endeavors, they made “meaningful” contributions. More than 80% also indicated that they

were motivated to do a “superior” job in completing their capstone-related responsibilities. By comparison, students who completed an internship course tended to report lower levels of intellectual challenge and less motivation to do a “superior” job. This may be attributable to the greater variability in internships; some may have met the capstone criterion of providing a “creative, inquiry-based learning experience that deepens the student’s knowledge and integration of the discipline” while other may not have.

Table 4. Student Perceptions of Selected Course Experiences Reported in 2008 College Senior Survey

Percentage of respondents who “strongly agreed” or “agreed” with the statement:	Senior Seminar	Com/Corp Internship	Independent Study	Honors Thesis
<i>Experience helped me better understand concepts introduced in related courses.</i>	93%	80%	92%	94%
<i>Experience provided strong intellectual challenges.</i>	94%	78%	91%	97%
<i>I was motivated to do a superior job.</i>	84%	75%	86%	88%
<i>I made meaningful contributions.</i>	91%	87%	91%	96%
<i>Experience was an outstanding aspect of my undergraduate education.</i>	85%	88%	88%	91%
<i>Experience encouraged me to apply to graduate or professional school.</i>	60%	60%	70%	73%

For many students, engagement in one or more of these course-based experiences also affected their future plans. At least 70% of respondents who had completed an independent study or honors thesis, and 60% of those who had completed a seminar or internship, said their experiences encouraged them to apply to a graduate or a professional school (Table 4).

Survey respondents also had the option to share thoughts about their experiences. Regardless of the type of course they had taken, most of those who chose to comment shared positive remarks. Most frequently, they highlighted the value of “hands on” experience in helping them to see things from new perspectives, gain a sense of “coherence” with respect to how the various strands of their earlier coursework were interrelated, and develop a clearer sense of their future academic or career aspirations. Students also commonly lauded the intellectual and personal growth they experienced, and expressed appreciation for the role their faculty mentors played in facilitating that development. Some also viewed these experiences as a “defining” aspect of their undergraduate education.

A minority of seniors (about 10%) expressed negative sentiments about their capstone experiences. In some cases, they felt the course(s) could have been better “organized” or they personally could have been better “prepared” to undertake such efforts. More prevalent, however, was a realization that the nature or intensity of the work required in these courses was not to their liking.

Taken together, survey findings indicate that sizable numbers of College students participate in some sort of meaningful capstone-like experience prior to completing their bachelor’s degree. However, there is an apparent lack of clarity among students about the language used for these integrative academic endeavors. Also, students tend to identify a broader spectrum of experiences than those specified in the survey as providing meaningful opportunities for curricular integration, synthesis, and application. Finally, there tends to be a shared sentiment among participants that engaging in such coursework is a valuable, and often powerful, aspect of their academic experience. This insight reaffirms the Capstone Initiative’s potential for enhancing undergraduate education.

Future Plans for UCLA’s Capstone Initiative

As noted in the opening paragraphs of this essay, UCLA’s Capstone Initiative aims to broaden substantially the availability of undergraduate capstone experiences by UCLA’s centennial in 2019. Toward that end, the Capstone Workgroup, in collaboration with the Undergraduate Council, has completed two phases of the Initiative. Phase one focused on defining a broad-based capstone model. Phase two emphasized both developing a certification process and certifying an inaugural group of Capstones Majors. In Winter 2009, the Capstone Workgroup initiated phase three with the following objectives: 1) expand the Capstone Initiative by certifying more Capstone Majors and establishing Capstone Programs, as feasible; 2) brand the capstone experience by adopting common language for the *UCLA General Catalog* and campus websites; and 3) establish models for assessing learning outcomes related to capstone experiences.

Expanding the Capstone Initiative

Early in Spring 2009, the Workgroup developed a [letter and survey questionnaire](#)¹² for departments and programs that were not part of the inaugural capstone group. The materials, which were approved by the Undergraduate Council, requested chairs (or designates) to review the UCLA Capstone Model and provide a list of courses in their curricula that might meet the capstone criteria. They also were asked to indicate their interest in becoming a Capstone Major, establishing a Capstone Program, or exploring capstone opportunities. Respondents were also given an option of indicating that they were “not interested” in exploring capstone possibilities at this time.

The Workgroup and Council added the “Capstone Program” option as an alternative to the Capstone Major for academic programs whose faculty are favorable to the Capstone Initiative but are not ready to set a requirement. Faculty in these programs are encouraged to review their course offerings and provide annual capstone options for at least 60% of their majors.

The 2009 Capstone Survey was sent to representatives of 87 majors offered by 11 interdepartmental programs and 40 departments. By late Spring 2009, responses from all 87 had been received. A [chart](#)¹³ detailing these responses is available online and summarized in Table 5.

Table 5. Summary of 2009 Capstone Survey Responses by Academic Unit

Academic Units	Number of programs surveyed	Interested in becoming a Capstone Major	Interested in establishing a Capstone Program	Interested in exploring capstone opportunities	Not interested now	Total survey returns
Arts and Architecture	3	1	1	-	1	3
Honors “Individual Major”	1	1	-	-	-	1
Humanities	39	3	2	33	1	39
International Institute	3	-	1	2	-	3
Life Sciences	7	3	1	3	-	7
Nursing	1	-	-	1	-	1
Physical Sciences	19	4	2	8	5	19
Social Sciences	14	3	2	7	2	14
Total Number	87	15	9	54	9	87
% Total Returns	--	17%	10%	62%	10%	100%
% of Undergraduate Degrees Awarded in 2007-08 by these Units		6%	5%	47%	11%	70%

Survey findings reveal interest across disciplines in establishing capstone opportunities for undergraduate students. A total of 24 degree-granting programs expressed immediate interest in becoming a Capstone Major or establishing a Capstone Program and, based on follow-up conversations, 12 opted to initiate the certification process as soon as possible. In general, students in many of these majors were already required to complete coursework consistent with UCLA’s capstone criteria. A few, in fact, expressed surprise that they had not been included in the inaugural group of majors considered for capstone status. Table 6 lists these 12 majors along with a brief description of the proposed capstone options.

Table 6. Majors Ready to Apply for Certification as a Capstone Major or a Capstone Program

Bachelor’s Degrees	Interest	Proposed Capstone Experience
Atmospheric, Oceanic, & Environmental Sciences	Capstone Program	Advanced elective course, i.e. 186
Chemistry/Materials Science [^]	Capstone Major	Advanced lab with projects (C185)
Chicana and Chicano Studies	Capstone Program	Adv. seminar or individual project
College Honors: Individual Major	Capstone Major	Honors Thesis
Computational and Systems Biology [^]	Capstone Major	Capstone course sequence: 186A-C
Earth and Space Sciences (4 majors):		
Geology/Applied Geophysics	Capstone Major	Course sequence 136A-C
Geophysics/Applied Geophysics & Space Physics	Capstone Major	Course sequence 136A-C
Geology/Paleobiology	Capstone Major	Course sequence 136 A-C
Earth and Environmental Science	Capstone Program	Courses 111 and 121; 199 and 198
Physiological Science	Capstone Program	Seminar or Individual Research
Study of Religion [^]	Capstone Major	Course 100 with 25-30 pg biography
Women’s Studies	Capstone Major	Senior Research Seminar: 187

[^]Degree programs offered by Interdepartmental Programs (IDP).

During the Summer and Fall of 2009, the Workgroup chair and staff met with representatives of all these units. Most are preparing applications for review in 2009-10; a few indicated a desire to apply at a later time. Faculty from an additional unit, Nursing—which had previously indicated only an interest in “exploring” capstone opportunities (per Table 5)—decided to apply, and the Nursing application was among the first submitted to the Workgroup in Fall 2009.

Excerpts from survey respondents indicating an immediate interest in submitting a capstone application demonstrate the range of opportunities currently available in these programs:

The Materials Chemistry Lab (C185) draws on knowledge gained across a broad range of chemistry and material science classes. While students do not design new experiments from scratch, many are somewhat open ended and the students must employ a good measure of experimental design in their measurements. If C185 counts [as a capstone], we [Chemistry/Materials Science] are already a capstone major.

Religion 100 - Spiritual Autobiography and Biography is a required capstone course for the Study of Religion Major. This seminar draws on all the courses that have been taken by [students] and requires [them to] interview a person from a religion not their own in at least three sessions for a total of 5-6 hours...[then write] a 25-30 page spiritual biography.

[Geology/Applied Geophysics] students are required to take the 136ABC sequence which provides intensive hands-on training of geophysical instrumentation (seismic, electromagnetics, etc.) and analysis tools (Fourier analysis, inversion, etc.) in 136AB and then 136C is a week-long field trip to use the tools in the field to address a “real world” problem. The most recent courses spent time in Peru, Mexico, and Mt. Etna in Sicily. The students produce tangible products from their research and many have presented their results at professional meetings.

Currently, the Capstone Workgroup is following up with the 12 other programs that indicated an interest in becoming a Capstone Major or establishing a Capstone Program (per Table 7); some plan to prepare applications as early as 2010. In responding to the survey, representatives from these programs noted their current coursework could probably be adapted for capstone certification and were interested in making modifications. Others expressed strong interest in capstone opportunities for their students but indicated a need for more resources to offer all students advanced labs or seminars with capstone experiences. Two programs specifically supported the idea of the Capstone Program (as opposed to Capstone Major) option as their faculty endorsed the concept but, given their curriculum, may not be able to establish a *required* capstone experience.

Table 7. Majors Indicating Interest in Becoming a Capstone Major or Establishing a Capstone Program in the Near Future

Interested in Becoming a Capstone Major	Interested in Establishing a Capstone Program
Arts and Architecture: Individual Major	Comparative Literature
Art History	Design Media Arts
Asian American Studies	East Asian Studies [^]
Hebrew	Geography (2 majors): Geography and Geography/Environmental Studies
Microbiology, Immunology, and Molecular Genetics	
Molecular, Cell, and Developmental Biology	German

[^]Degree program offered by an Interdepartmental Program (IDP).

A total of 54 programs (62% of 87 majors surveyed) expressed interest in the Capstone Initiative but wanted “more information” before pursuing certification (see Table 5). In responding to the survey, most listed possible capstone courses that their programs offered currently. These programs can be divided into three groups related to the general tenor of their responses (described below). In Fall 2009, the Workgroup chair and staff began following up with faculty from these 54 programs, prioritizing those in the first and second groups described below. These communication and facilitation efforts will continue throughout this year and beyond.

The first group (17 programs) has existing curricular options that could be developed into capstone experiences for most or all of their majors. They are in various stages of discussing how to expand these options and/or incorporate new coursework elements. Included in this group are programs in Anthropology, Asian Languages and Cultures, Italian, and Physics & Astronomy.

Programs in the second group (29) are considering how to adapt their existing curricula to increase participation. Their challenges in satisfying certification criteria are greater than those in the set above. For example, the Department of Linguistics (which offers 11 majors) has existing capstone opportunities for all of their students but participation varies widely based on course of study, student preparedness, and curricular requirements. The Biology major in Ecology and Evolutionary Biology faces challenges (given the large size of the major) that it must address to engage substantial numbers of students.

The remaining programs (8) expressed interest in exploring capstone possibilities and have existing curricular opportunities but reported planning constraints given available resources. Many in this group, which includes Chemistry and Biochemistry, Philosophy, Political Science, and Sociology, have ideas for how to broaden participation. However, factors such as high enrollment relative to faculty, existing curricular requirements that leave little flexibility, and the expense of providing needed equipment create considerable challenges to supporting significant participation.

Only nine of 87 majors surveyed indicated that they are “not interested now” in exploring capstone possibilities. The Department of Mathematics with five majors led the list, which also included Economics and Business Economics. These departments offered no comments, but brief follow-up conversations indicated that departmental representatives responsible for completing the survey thought their programs were simply too large to provide capstone options. Representatives from the remaining two majors, Arabic and Architecture and Urban Design, noted that students lacked either the language competence or the curricular space for a capstone project.

The unprecedented fiscal crisis now facing UCLA (reviewed in *Essay A*) will be a significant factor in strategic planning for the Capstone Initiative. All academic programs are being carefully re-examined and some will be pared down. In a summer [memo](#)¹⁴, Executive Vice Chancellor and Provost Scott Waugh charged departments to:

Limit and re-examine the number of units required for majors. Many majors have grown through the gradual addition of courses over time, rather than through serious consideration of what should be required of students. As a result, many programs demand too many units of their majors, many more courses than can be practically offered in the present environment. The College’s “Challenge 45” (reducing upper-division requirements for the major to 45 units) is one step toward streamlining... .

As departments evaluate the curriculum for each degree program, they must identify courses that are core to the major, and examine students’ progression to some end point or culmination. As a result, departments may require fewer courses; they also may engage in renewed discussions of what is expected of students and how to measure whether students have achieved these “learning outcomes.” In a sense, crisis may become opportunity as the faculty envisions a reduced, but better-shaped, curriculum that, in some cases, may be strengthened by incorporating capstones.

In 2010-11, the Workgroup also will begin working with program faculty to address possibilities for establishing Capstone Minors. About 35% of UCLA students graduate with a declared minor, now available in 76 fields. Some are offered through departments and professional schools, while others are freestanding interdepartmental minors. Many, such as Biomedical Research, Civic Engagement, Disability Studies, Museum Studies, and Urban & Regional Studies, require capstone seminars or research projects. Students whose majors do not offer capstone experiences may find opportunities in their minors.

As reflected earlier in this essay, a cadre of UCLA faculty and staff across diverse academic disciplines has worked to define different types of capstone experiences that they believe serve to enrich undergraduate education. These individuals are a significant resource to other colleagues who are interested in considering the capstone potential within their degree programs. Based on the interest expressed to date, we anticipate that a majority of our undergraduate degree-granting program faculty will engage over the next five years in discussions about capstone possibilities.

In undertaking this work, UCLA recognizes that complex resource, curricular, pedagogical, and other challenges may preclude some programs from implementing capstones. Others simply may decide not to participate. The Capstone Initiative is *not* intended as a directive to program faculty. Rather, it is an effort to enhance, as feasible, UCLA’s already outstanding undergraduate programs in potentially new and innovative ways.

Branding UCLA’s Capstone Experience

Communicating to students, faculty, and others about UCLA’s Capstone Initiative requires thoughtful changes in the manner in which we describe course and major requirements, as well as

the ways in which we promote undergraduate education to prospective students and their parents. Currently, we envision changes in the following: 1) course syllabi and evaluation; 2) *General Catalog* and department website information; and 3) advising materials for students.

Course Syllabi and Evaluations. Courses that satisfy a department's capstone requirement will be identified by the course title and/or in the course description. Each time a capstone course is offered, the faculty will note that the class meets the department's capstone requirement. In addition, the faculty will discuss and post the learning outcomes (in the syllabus or course website). Over the next few years, student evaluations of capstone courses will be redesigned to ask students to rate their experiences and achievement related to key learning outcomes (discussed in *Essay B*). Faculty in engineering have already added items about learning outcomes in their course evaluations, and they will serve as mentors to others in implementing this practice campuswide.

General Catalog and Departmental Websites. Capstone Majors and Capstone Programs will be identified in the *UCLA General Catalog*. In addition, learning outcomes for capstone experiences will be included. For the Department of History, as an example, a paragraph will be added to the 2010-11 catalog under the heading of "Undergraduate Study":

History is a Capstone Major; each undergraduate student must take a capstone seminar and demonstrate appropriate mastery of a specialized area of history and a critical understanding of current scholarly literature and debates, as well as design and complete a research project, drawing on primary sources and appropriate scholarly literature.

In addition to the new catalog copy for the Department of History, two additional [samples](#)¹⁵ are posted for review, one for the Department of Classics and one for the Department of Electrical Engineering. These samples demonstrate how UCLA will publicize capstone opportunities and learning outcomes associated with these experiences.

Departments with a Capstone Major or Capstone Program will also be encouraged to post learning outcomes on their websites for undergraduate students. For example, [Electrical Engineering](#)¹⁶ has posted its learning outcomes for the undergraduate program and specific undergraduate courses.

Advising Materials for Students. Student advising materials will clearly identify the capstone requirement. Musicology, for example, has posted a [check sheet](#)¹⁷ for majors, which outlines the capstone requirement for Music History majors. In addition, the orientation handbook will include examples of capstones, as well as an explanation of learning outcomes associated with these experiences. Materials provided by the admissions office will also give coverage to UCLA's Capstone Initiative and identify majors that provide these opportunities.

Assessing Capstone Learning Outcomes

As noted in *Essay B* of this report, departments with Capstone Majors have been asked to articulate learning outcomes for students based on their capstone requirements, and a listing of learning outcomes for each Capstone Major is presented in [Exhibit 7.1A](#)¹⁸ of Appendix 5. Additionally, each department will periodically assess students' success (or lack thereof) in achieving the learning outcomes. In accordance with the new guidelines and timetable now set for UCLA's Academic Senate Program Reviews, faculty will be asked to provide a summary of these periodic assessments in the self-review report prepared for the program review (see *Essay B*).

The nature of learning outcome assessments will be determined by the faculty who, in designing and piloting their assessment tools and protocols, will be assisted by assessment staff from units in the Division of Undergraduate Education. Additionally, we will engage faculty who have previous experience assessing learning outcomes (e.g., those in Engineering for ABET accreditation).

Key to the assessment effort for most Capstone Majors will be evaluating students' culminating products (seminar papers, design projects, performances, etc.) from capstone experiences. In Marine Biology, for example, the capstone experience entails conducting field research in small teams and writing a research paper. Learning outcomes, which program faculty established as part of their capstone application, are listed in Table 8, along with possible assessment strategies, which the faculty is discussing this year (2009-10).

Table 8. Learning Outcomes and Possible Assessment Strategies for the Marine Biology Capstone

Learning Outcomes	Possible Assessment Strategies
<ul style="list-style-type: none"> • Demonstrate broad-based knowledge of the fundamentals acquired through coursework, including general knowledge and developing skills in library research, interpreting data, synthesis, and scientific writing. • Utilize the current primary scientific literature, including searching databases, identifying appropriate sources, and reading and understanding papers. • Use knowledge gained in classroom and during discussions to conceive and execute their own project. • Communicate original scientific work to colleagues and mentors in oral and written form. • Exhibit strong teamwork and problem solving skills. 	<ul style="list-style-type: none"> • Archive term papers, sampling a range of papers from A (best in class) to C (average) or below. Have faculty panel judge the students' levels of scientific writing and abilities to interpret data. If students exhibit recurring problems, determine how the field course or courses taken before the field quarter need to be modified to better prepare students for the capstone experience. • Use the department's spring science poster event to award prizes for the best field research and review these students' oral and written performance; publish excellent papers as 'best examples' for faculty and students.

According to the Academic Senate's Program Review schedule, Marine Biology is next scheduled for review in 2014-15. As part of the self-review report, the faculty will be asked to: 1) articulate learning outcomes for the capstone experience, 2) summarize their effort to assess the extent to which students have achieved these outcomes, and 3) discuss changes (if any) implemented as a result of their evaluation.

Summary

UCLA attracts some of the best students in the state and nation. In the interest of enhancing their development as scholars and providing them with opportunities to demonstrate their knowledge and skills creatively, we have embraced a bold initiative that holds the potential for transforming the UCLA undergraduate experience. Our long-term goal for the Capstone Initiative is to broaden substantially the availability of undergraduate capstone experiences by UCLA's centennial in 2019, which coincides with the next WASC reaccreditation.

In the past two years, UCLA has made substantial progress toward this goal by: 1) establishing criteria for UCLA capstone experiences; 2) creating a certification process for Capstone Majors and Programs; 3) certifying an inaugural cohort of Capstone Majors and Programs; 4) initiating a process for helping Capstone Major and Capstone Program establish learning outcomes assessment plans; and 5) responding to departmental interest in the Capstone Initiative.

Clearly, the unfolding financial crisis presents a defining moment for our academic community, a time when we are faced with both extreme challenge and tremendous opportunity, and when the choices we make about what to preserve and promote will have an indelible impact on the university we become. This is an occasion that calls us to reconsider the core elements of UCLA's undergraduate education, to engage in new dialogue about learning and teaching, and to reflect on how our existing curricula, pedagogical practices, and policies serve to enhance educational effectiveness. As we prepare for these challenges, the Capstone Initiative holds potentially great promise for anchoring academic programs that are streamlined, cohesive, and integrative.

ESSAY D

UCLA's Educational Technology Initiatives: Enhancing Learning and Teaching

Introduction

UCLA embraces the potentially powerful contributions that educational technology can make in enhancing learning and teaching, and we are proud of our accomplishments toward establishing what we believe is one of the best technology-enriched educational environments in the country. Our efforts are grounded in the belief that the utility of educational technology lies in the extent to which it can be used to solve perennial pedagogical challenges that faculty confront and eliminate inherent constraints that characterize conventional teaching situations. We are not interested in educational technology for its own sake or for its “automating” capacity. Rather, our focus is on understanding how the application of educational technology can enhance learning and teaching.

We approach this work with high levels of optimism and commitment. At the same time, we are reluctant to move too quickly based on our awareness that within real-life educational contexts, *increases* in learning, as opposed simply to *changes* in learning, are difficult to identify. While there is considerable literature on applications of technology to learning environments, the contexts within which research has been conducted are diverse and the findings are not definitive. Like our colleagues at other universities, we are still in the early stages of understanding the true impact of educational technology on learning and productivity.

UCLA's academic community is rich with ideas for using technology-enabled pedagogy to facilitate selected learning outcomes, and we are committed to providing well-equipped teaching spaces, assessing pilot efforts, sharing findings, broadening implementations, and rewarding innovators. Our technology enhancement efforts are supported by a [broad-based planning process](#)¹ that is redefining what we strive to accomplish and how we intend to achieve our goals, particularly in light of severe current and near-term economic pressures. We view our continued progress to be tightly linked with our ability to establish and maintain a cohesive instructional technology environment through collaborative efforts and creative leadership.

Our technology enhancement efforts are also supported by a recently proposed [UCLA Information Technology \(IT\) Plan: 2009-2018](#)². The plan describes a model for the co-existence of IT-supported innovation at the unit level, and individual and large-scale innovation through IT-supported collaborations as well as interdisciplinary and inter-institutional programs. The plan also introduces the concept of the digital UCLA citizen who is literate in IT but also understands the responsibilities of being an IT-user in a community and an institution.

In [Essay 6](#)³ of our *Capacity* report, we reflected on our past successes in: providing support for technology in instruction; establishing a governance structure for deciding institutional information technology direction, policy, and investment; developing a campus-wide vision for educational technology that enriches learning, teaching, and research environments; using the Internet to engage students in scholarly interaction; and enhancing external access to UCLA. We also considered how to most effectively, and efficiently, continue developing a Common Collaborative Learning Environment (CCLE). In its [report](#)⁴, the WASC Site Visit team commended UCLA's focus on using educational technology to enhance students' academic experiences:

Unlike many institutions that perceive educational technology as merely a utility or a suite of tools, UCLA is forward thinking and leverages educational technology to support active learning, scholarly interaction, and intellectual pursuit—enabling its graduates to be informed and discerning global citizens and contributing working professionals.

In the present essay we update our progress in three key areas. First, we highlight campus efforts to create effective teaching spaces, understand student perspectives on educational technology issues, and develop a cohesive instructional technology environment at UCLA. Second, we showcase selected faculty-initiated efforts to engage students more actively in course content through the use of educational technology tools and to enrich technology-enhanced instructional efforts. Third, we spotlight College librarians' efforts to provide information literacy instruction to students across many disciplines, then focus on the information literacy development of entering students enrolled in the Freshman Cluster Program. We close the essay with a brief summary of future plans.

Common Solutions for Campus Educational Technology Issues

The three topics selected for this section of the essay grew out of our *Capacity* essay on Educational Technology and discussions with the WASC Site Visit Team in 2008. The topics, which include: 1) creating effective teaching spaces, both virtual and real; 2) understanding student perspectives on educational technology issues; and 3) creating the Common Collaborative Learning Environment (CCLE), are subjects that are important to faculty and students alike. These topics are also key to many of our discussions on enhancing learning and teaching.

Creating Effective Teaching Spaces, Virtual and Real

The concept of teaching spaces has long surpassed the standard physical environment of classrooms and laboratories. These categories of space, however, are still critical in applying many kinds of educational technology. At UCLA, the approximately 200 general assignment classrooms are 100% network-connected, 98% equipped with projection or monitor display hardware, and 50% equipped with computers. As noted in the [OID website listing](#)⁵ for Audio Visual Services, rooms are also equipped to support multiple media sources and outputs.

General assignment rooms are equipped, upgraded, and prioritized according to a five-year [management plan](#)⁶ that is overseen by a classroom committee composed of administrators (representing Facilities Management, Capital Programs, Instructional Development, the Registrar, and Classroom Services) and faculty. The group established one of the earliest examples of [classroom design standards](#)⁷ in higher education in the late 1970's, and the most recent version was issued in Fall 2006 to address current expectations for teaching with technology. [Annual reports](#)⁸ highlight changes and emerging issues. The Committee has surveyed students about their classroom experiences and, apart from the provision of left-handed writing tablets in lecture halls (an issue addressed nearly two decades ago), the students seem to have little concern about classroom features and technology. They have extensive comments about perceived temperature and ventilation issues in classrooms, but technology itself seems transparent to them – it is just “there.” Student data, therefore, have not contributed to a plan for action.

Additional special physical environments have also been built for instruction, such as the [Visualization Portal](#)⁹ that enables presentations in vivid 3-dimensional formats, the Keck GIS Laboratory currently under construction in the Young Research Library, the College Library Information and Computing Commons (CLICC), Academic Technology Services, the Center for Digital Humanities, Social Sciences Computing labs, Office of Residential Life labs, and numerous departmental or divisional laboratory spaces. Of these, the CLICC teaching space, located in the

Powell Library Building (the undergraduate library), sees the heaviest utilization, and almost 97% of its total use is by undergraduates.

Since opening in 1996, CLICC has conducted [annual surveys](#)¹⁰ of user populations to follow changes in student perceptions, needs, and use. A ten-year longitudinal study of those data revealed a number of key differences between the UCLA population and national IT industry predictions about student behaviors. For example, although most UCLA students own personal computers and increasingly have high-speed Internet access from their residences, lab use remains steady and, in some cases, has even increased moderately. In addition, despite widespread wireless access to Internet resources on campus, the overwhelming majority of UCLA students who have their own laptops do not bring them to class or to campus. Preference for the Windows platform has also remained high, yet a resurgent student interest in Macintosh laptops caused CLICC to change the inventory of its hardware and to dramatically expand the number of available laptops to meet student requests. In response to student requests, during the last seven weeks of each quarter, CLICC now also provides 24-hour access. Additionally, CLICC operates three dedicated computing classrooms where faculty can teach in-class, computing-intensive material.

In 1997-98, UCLA took a major, innovative step to digitally expand the concept of teaching spaces by establishing the [Instructional Enhancement Initiative](#)¹¹. Through the introduction of course websites, the pioneering [MyUCLA portal](#)¹², and enhanced access to computing laboratories, the Initiative has guided a concerted effort to promote the use of digital resources both within and outside the classroom and has affected almost every aspect of undergraduate education at UCLA.

The vast digital resources of the Library have enormously expanded and enriched UCLA's digital learning space. While books still comprise the major part of College Library reserve materials, digital materials in e-reserves have also become an established part of the student resource base. Additional resources of original data in digital formats via the [Institute for Social Research](#)¹³ or the [Center for Embedded Network Sensing](#)¹⁴ provide a wealth of materials that can be readily adapted from research to instruction. The [Institute for Digital Research and Education](#)¹⁵ exists specifically to serve as a focal point for expertise in digital domains in a cross-disciplinary environment and to serve instruction as much as research. To align student performance with the richness of these resources, the campus must also help students develop additional skill sets and provide them with supporting library tools and software instruction.

Another response to providing supplementary instruction and virtual access has been webstreaming through the UCLA [BruinCast](#)¹⁶ program. BruinCast is a service offered by the Office of Instructional Development (OID) to video stream and/or audio podcast regularly scheduled undergraduate lectures for review purposes. Video Streaming allows students to see the instructor, whiteboard, slides, and any image that is shown through the video/data projector. Audio podcasting can be an equally powerful review tool when combined with materials made available through an instructor's course website. While the current intent of these services is to provide augmentation of the lectures and to respond to the asynchronous study behaviors of students, the program may be asked to serve additional purposes.

The UC Office of the President is currently examining the feasibility of providing additional online instruction to promote inter-campus cost savings. Within the local UCLA context, which is severely hampered by the lack of large lecture halls, BruinCast may also provide a tool to increase the capacity of individual courses. The campus will experiment with the concept of "e-sections" that would permit students to access the lecture from their laptops at almost any location and leave physical attendance an optional activity. While this instructional format is not universally

applicable or desirable, the changed fiscal environment described in *Essay A* requires that UCLA explore alternate delivery and instruction systems that can be both effective and highly efficient.

One reason for optimism is that the Office of Instructional Development, which has monitored BruinCast use since the service's inception in 2005, has conducted [surveys](#)¹⁷ of students and interviews with faculty in BruinCast supported classes. Over the past three years, both students and faculty have consistently supported the service based on its positive effects on learning and teaching. For example, as illustrated in Table 1, 96% of student survey respondents (N=917) reported that webcasting was "somewhat helpful" or "very helpful" in affecting their learning.

Table 1. BruinCast Survey Questions and Responses for Three Spring Terms

A. To what extent do you think the webcasts/podcasts affected your learning in this class?

	Spring 2006	Spring 2007	Spring 2008	Average
Very Helpful	90%	86%	79%	85%
Somewhat Helpful	5%	10%	16%	11%
No Effect	3%	4%	1%	3%
Somewhat Detracted	1%	0%	0%	1%
Strongly Detracted	0%	0%	0%	0%
Did not use webcast/podcast	0%	0%	4%	1%

B. To what extent did having the lectures available online affect how often you came to class for lecture?

	Spring 2006	Spring 2007	Spring 2008	Average
More likely to attend class	1%	12%	9%	7%
Somewhat more likely to attend class	5%	4%	4%	4%
Did not affect my attendance	36%	36%	50%	41%
Somewhat less likely to attend class	24%	31%	24%	26%
Less likely to attend class	33%	18%	11%	20%
Did not use webcast/podcast	0%	0%	3%	1%

C. How do you agree with the following? "I think that having access to the webcasts allowed me to spend more time reviewing course materials than I would have if the webcasts were not available."

	Spring 2006	Spring 2007	Spring 2008	Average
Strongly agree	73%	68%	68%	70%
Agree	19%	23%	20%	21%
Neutral	8%	7%	7%	7%
Disagree	0%	1%	1%	1%
Strongly disagree	1%	0%	0%	1%
Did not use webcast/podcast	0%	0%	3%	1%

Faculty members were also largely supportive of BruinCast. They recognized that students appreciated the service and noted that it enabled them to use office visits and e-mail to address more substantive questions. Faculty also reported instructional benefits, including that they needed less time in class to review material and were less bound by their textbook's offerings since students had the ability to review lectures for clarification. Nearly every faculty member commented that BruinCast was a "great way to disseminate knowledge." Even so, many continue to restrict access to their lectures given concern that they might accidentally commit copyright infringement or compromise protection of their own intellectual property.

The growing demand for BruinCast reflects the overwhelmingly positive response from students and faculty regarding the service. Presently, BruinCast serves roughly 50 to 60 courses per quarter, which is the current capacity of the system. Plans are underway to incorporate newer technology and expand capacity during the 2009-10 academic year.

The utility of BruinCast underscores the transitional state of distance learning at UCLA. Long-used by multi-campus programs (e.g. Armenian Studies, Transportation Studies, Religious Studies, etc.) in a synchronous format, BruinCast has moved to include the "Less-Commonly Taught Languages," and is now finding additional adherents in larger language departments. Asynchronous and completely online instruction has also taken hold, most noticeably in the professional schools. Engineering offers an entirely online Masters Program, while Management provides several online courses that are widely offered within the UCLA Extension Program. While the main campus curriculum has not previously defined distance learning and/or exclusively online instruction as a priority need, the preliminary success with the supplementary BruinCast program and the new fiscal realities may accelerate adoption of such approaches.

Understanding Student Perspectives on Educational Technology Issues

Most incoming UCLA students are reasonably comfortable with a limited set of core technologies. As they proceed through their undergraduate studies, the set of skills they are expected to demonstrate expands. One major set encompasses so-called "universal skills," which include: developing search strategies; using logical operators; employing various communications networks and devices; and demonstrating graphical literacy as well as presentation skills.

Incoming students express varying self-assessments of their technology experience and skill levels. The Cooperative Institutional Research Program (CIRP) [Freshman Survey](#)¹⁸ asks UCLA freshmen to provide self ratings. In the 2007 Survey, roughly 33% of freshmen respondents (N=4,140) rated their computer skills "above average" or "highest 10%" relative to their peers, while slightly over half rated their computer skills as "average." About 11% rated their skills "below average" or "lowest 10%." When asked how often they used the Internet for homework, 86% indicated they used the Internet "frequently," 14% "occasionally," and less than 0.5% "not at all."

Comparing these two categories of responses, we might conclude that despite their sense of familiarity with using Internet resources, freshman are only moderately confident in their ability to use computers relative to their peers. However, this may have more to do with experience than capability. When asked to rate how well they "...do each of the following tasks as compared with the average person your age," student responses, reported in Table 2, demonstrate confidence with tasks they have already performed but uncertainty about tasks they have yet to undertake.

Table 2. CIRP Items Related to Information Technology Skills (2007 Survey)

	N	Above Average	Average	Below Average	NA* or don't know
Ability to download & use file (text, music, photo)	1,826	50.3%	43.6%	5.6%	0.4%
Ability to send an attachment with email	1,824	61.0%	35.7%	2.9%	0.4%
Ability to manage files on your computer	1,813	42.1%	46.3%	10.0%	1.4%
Ability to create a presentation electronically	1,810	33.5%	48.6%	15.1%	2.6%
Ability to download and use a podcast	1,781	16.0%	30.1%	28.9%	9.2%
Ability to upload a file (text, music, photo, etc)	1,798	31.4%	36.7%	21.8%	9.2%
Ability to contribute to a wiki	1,788	10.8%	20.2%	22.3%	41.6%

* NA = Not applicable

These findings are also supported by data gathered independently through the annual CLICC lab survey, which show that only 5% of respondents feel they lack the skills they are expected to demonstrate. Over time, as students become increasingly more familiar, and proficient, with a broader range of computer skills at even younger ages, we expect that entering cohorts of UCLA students will exhibit increased skill and confidence with respect to technology use. We cannot assume though that their self-assessments will always match their actual performance abilities.

As counterpoint to the question of how well prepared students perceive themselves to be when they enter UCLA, we also asked seniors how they experienced the UCLA educational technology environment. Findings from the [2007 Senior Survey](#)¹⁹ reveal that among College of Letters and Science respondents (N=4,607), 60% said that they had “often” or “very often” used web-based course materials and tools over the last two years. Only 9% said that they needed technical assistance. The majority of respondents “agreed” or “strongly agreed” that the availability of web-based materials and applications:

Increased engagement in the course	71%
Increased interest in the subject	50%
Made it easier to collaborate with classmates	70%
Helped in learning effectively outside of class time	72%
Helped to better understand complex concepts	62%

Our seniors have also shared their insights on how UCLA’s web-based course materials could be improved. Looking across the four divisions of the College of Letters and Science, it was not lower cost or more technical training that seniors wanted. Rather, they encouraged further investment into the websites themselves, greater access to web-based materials, and more extensive faculty use of websites. Students also had issues with the multiplicity of website formats, and we will address this in the section below on creating the Common Collaborative Learning Environment (CCLE). One challenge in analyzing future Senior Survey data will be to differentiate trends that are fundamentally the result of changes in entering students’ skill sets from those attributable to changes in the UCLA website environment, both of which are developing rapidly.

Creating the Common Collaborative Learning Environment (CCLE)

UCLA's commitment to using educational technology to improve student learning is reflected in ongoing, campus-wide collaboration to foster the adoption of a single course management system that is also suitable for research applications. The process illustrates UCLA's commitment to collectively addressing instructional issues and adapting to changing environmental circumstances. It also reflects our efforts to critically examine the cohesiveness of the instructional technology environment.

Numerous (more than two dozen) course management systems have been employed at UCLA. Arguments in favor of sustaining such diversity were eventually overcome by increasing institutional cost and the complexity of maintaining and interacting with so many systems. The [Faculty Committee on Educational Technology](#)²⁰ (FCET) made a strong recommendation in May 2005 that UCLA converge on a single solution for a course management system through a "consistent, powerful, and transparent application." An intense period of discussion through two campus *ad hoc* groups (the Functional Support Group and the Technical Support Group) resulted in a recommendation that the application selected should be an open source solution. Further analysis and debate resulted in a subsequent [report](#)²¹ and the selection of Moodle, in October 2006, as the open source platform. By April 2007, an Alpha Moodle service was in place as an extensive campus discussion ensued on the various governance and funding models that might be employed. The CCLE Planning Team was appointed to "engage in broad campus consultation and to recommend the appropriate scope, scale, staffing, architecture, operation, use, and funding for the next phase of the CCLE initiative."

By August 2007, the Planning Team submitted its report and, at the first opportunity, that October, it had submitted its request for funding to the Chancellor's Office through the Committee on Information Technology Infrastructure ([CITI](#))²². Funds were allocated in early 2008, and the plan was implemented through defining and recruiting staff positions, selecting a "home" for the CCLE functions in the Office of Instructional Development, soliciting the deans to "opt-in" to the shared system, and establishing CCLE's own advisory and oversight group, the CCLE Standards and Practices Group (S&PG.) In addition, the S&PG established a shared training, support, and development infrastructure, worked out the technical and legal (FERPA) public and private controls for course materials, and developed batch creation of courses and pre-population of course rosters. A special subcommittee of the S&PG took on the task of defining a process and selection criteria for awarding Innovation and Development grants within the larger Moodle structure, and made its first round of allocations in April 2009.

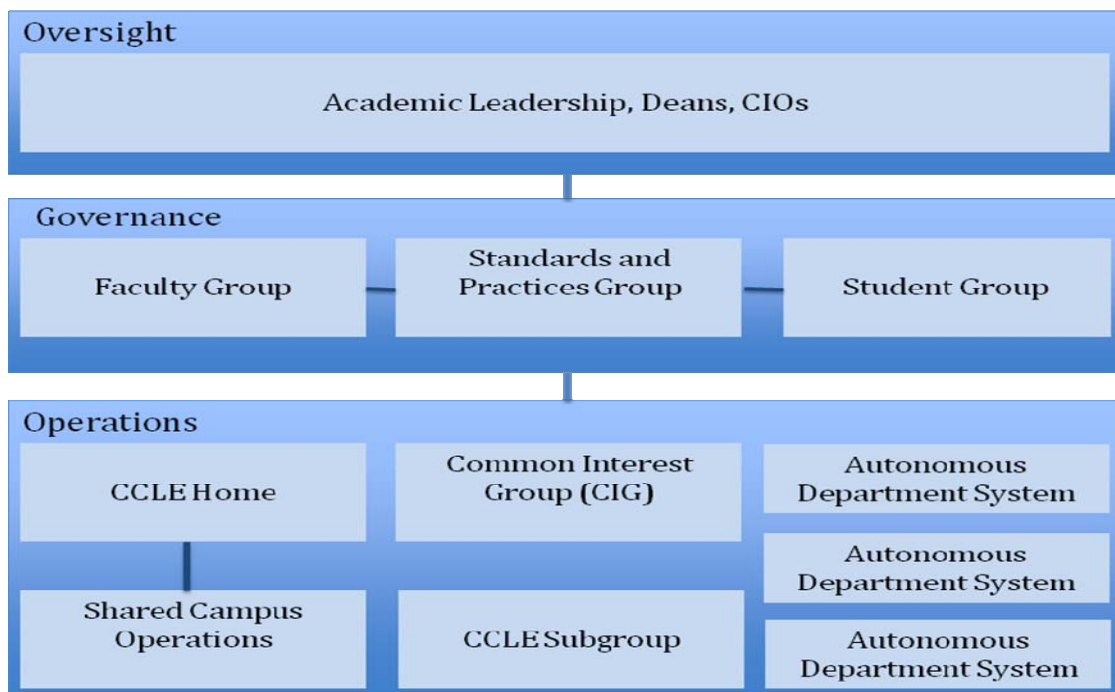
Universities are often criticized for their inability to move quickly as they engage in lengthy review and approval processes. UCLA's implementation of the CCLE, however, has been both expeditious and extensively consultative. Its collaborative structure depicts a model of federated management—one of shared participation and responsibility—that is likely to become more commonplace within university structures as solutions to learning and teaching issues expand beyond the ability of individual departments and schools to respond.

The CCLE has established a three-tiered shared governance model that distributes responsibilities for overseeing operational and pedagogical needs campus-wide. In response to the site visit team's [report](#)²³, a brief overview of CCLE's organizational plan for oversight, governance, and operations follows, and sets the framework for future assessment of the collaboration's educational effectiveness.

Developing a cohesive instructional technology environment is a test of leadership, governance, and resources. The CCLE Initiative has engaged each of these needs as it moved from conception to implementation. As delineated in the initial Planning Team’s five-year implementation [plan](#)²⁴, a shared governance model requires academic leadership that depends on faculty and student participation. Moreover, successful operations rely on campus-wide collaboration for technical support at the department level. Figure 1 illustrates the general framework of the governance model. The multi-tiered shared model of governing CCLE is consistent with UCLA’s overall approach to managing information technology on campus, which is discussed in the new proposed IT Strategic Plan.

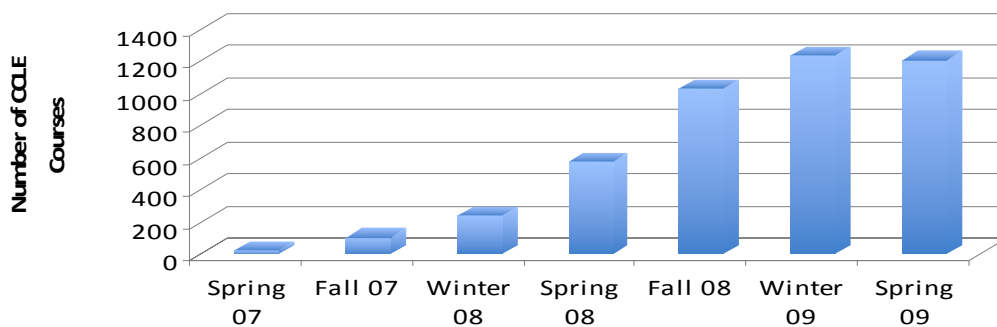
The Faculty Committee on Educational Technology (FCET), the Information Technology Planning Board (ITPB), and various deans of Schools and Divisions who have opted into the collaboration provide oversight for CCLE’s shared governance. The S&PG works with faculty and student groups to provide balanced governance across campus constituencies. Operations are maintained by shared campus operations under the supervision of the CCLE home, which resides within the Office of Instructional Development (OID). Various regional and autonomous department systems offer hands-on support at local levels.

Figure 1. Overview of the Three-tiered Shared Model for Governing CCLE



Ensuring that the ideals of the planning document manifest in the structures built in response to the plan has been no small effort. Even so, the growth of the CCLE has been successful beyond initial expectations. As of April 2009, 12 of 14 deans had committed to the CCLE, and appointed voting representatives to the S&PG. The number of different Classroom Management Systems on campus has significantly decreased, and additional independent systems are likely to be dropped as their license agreements expire. The number of collaboration sites has grown to roughly 300, and the number of courses using the CCLE reached 1,200 by Winter 2009 (Figure 2). A summary of the program’s progress and development is contained in the first CCLE [Annual Report](#)²⁵.

Figure 2. Number of Courses Managed through CCLE



Results from a recent survey of students and faculty who use CCLE’s course management system indicated that 82% of the 752 student respondents found CCLE “easy” or “very easy” to use, with slightly over half (51%) reporting they “haven’t had any difficulties.” Nearly two-thirds of student respondents rated their “overall experience” with CCLE as “good” or “excellent.” Among the 132 faculty respondents, 62% reported that CCLE was “easy” or “very easy” to use, and 40% cited “general usability” as the “most significant advantage of using CCLE to deliver course materials.” A [summary](#)²⁶ of the survey results, including student and faculty comments, is posted as a UCLA WASC document.

Assessing Learning and Teaching Using Educational Technology Tools

Like their counterparts at other universities, UCLA faculty members have historically tended to rely too heavily on indirect and affective indicators to assess educational effectiveness. These types of student perception and self-assessment measures provide important information about the added value of instructional enhancements, but they do not provide direct indications of learning. With the collective support of the various assessment offices across campus, UCLA instructors are now pursuing more direct assessment efforts (see *Essay B*). In this section, we spotlight faculty’s use of Moodle-based tools to enhance instruction and assess learning. We have selected three examples; two focus on language instruction in introductory Hebrew and Italian classes. The third comes from the incorporation and assessment of Quiz Tool in an introductory statistics course and involves a multi-year assessment project.

Introductory Language Courses: Two Pilot Studies

Dr. Nancy Ezer (Lecturer in Hebrew) has created the Hebrew E-Workbook Project, wherein she has created a fully online workbook using CCLE Moodle’s Quiz Tool. The primary features of this workbook include fully automated grading, instant feedback, and the ability for students to make multiple attempts on classwork and homework. It also provides grade and other detailed statistical information for instructor monitoring of the class as a whole and individual students. UCLA’s [Center for Digital Humanities](#)²⁷ compiled data on student performance during a pilot study of the E-Workbook and compared it to the performance of students using a paper-based version of the same workbook. The data support significantly improved student learning for those using the E-workbook due to:

1. Instantaneous feedback that increases students’ motivation to produce perfect, or near perfect, work. Each student, on average, makes 3-4 attempts on a particular homework or in-class assignment, which results in better performance on important exams when compared to students using the paper version of the workbook.

2. Increased accessibility that allows students to drill and master difficult concepts at their own pace.
3. Automated feedback and ready availability of lessons, class work, and exercises. Instructors can refer students to the workbook, saving instructor time and effort and allowing intensified focus on students' mastery of Elementary Hebrew.
4. Availability of detailed statistical data, which enable the instructor to design lessons and materials tailored to strengths and weaknesses of individual students and the entire class.
5. Easy monitoring of ongoing assignments, which can be improved instantaneously when the instructor discovers errors, thereby minimizing potentially negative impacts for students and maximizing learning potential.

As one of the early adopters of CCLE Moodle, Dr. Ezer has successfully demonstrated its robustness and validity as an effective instructional tool. Similarly, Dr. Elissa Tognozzi (Lecturer in Italian) found that CCLE Moodle supported the use of WIMBA, a voice tool communication product, to significantly improve student learning in Italian language courses. In a Fall 2007 pilot study, Dr. Tognozzi assessed the accuracy and fluency levels of two groups of Elementary Italian students, with one group using WIMBA and a control group engaging in the same oral activities exclusively in the classroom. The study evaluated the integration of WIMBA into the traditional curriculum and the effectiveness of technology in improving students' speaking ability and confidence. The WIMBA group completed weekly oral activities on the web and received oral feedback from instructors through web communication; the control group completed the same weekly oral activities in the classroom with student-teacher interaction and feedback taking place in the classroom.

At the end of the quarter, both groups recorded identical final oral exam scores using the WIMBA software. After an inter-rater reliability study was done, a trained rater recorded errors for all speech samples. The scores were attached to the students' pre- and post-surveys to determine the general comfort level of students using voice technology, faith in voice technology to accurately represent their abilities, and expectations of the increased accuracy of this type of voice technology. Findings showed that students who used WIMBA produced a greater number of words, had a wider range of vocabulary, were more accurate in their word order, and demonstrated better fluency. As such, WIMBA is now integrated with CCLE Moodle for all level 1 through 6 Italian Language courses.

Introductory Statistics Courses: A Multiyear Assessment

The following case study of [Statistics 10](#)²⁸ – *Introduction to Statistical Reasoning* illustrates the experiences of a large-scale general education course that explored, assessed, and eventually implemented a blend of in-class instruction and Moodle's Quiz Tool in order to achieve a critical transformation of learning through innovative applications of technology.

Beginning in Winter 2005, Dr. Mahtash Esfandiari (Senior Lecturer in Statistics) extensively redesigned Statistics 10 by using online quizzes, weekly labs, and homework to maximize students' roles as active learners, and minimize their roles as passive recipients of information. In doing so, she believed that she could capture students' attention and motivate them to think about statistics as a "science of data" for answering real world questions rather than as a series of stepwise calculations with no real context. Her primary instructional objective was to minimize lecturing and maximize time working directly with students to help them construct their own terms for understanding through a generative learning process. The process required students to use prior

knowledge to create new ways for answering questions and necessitated considerable instructor/student interaction. Considering the number of students involved (up to 2,000 annually), Dr. Esfandiari needed to identify, and ultimately develop, an instructional tool that made it possible for the instructor and the teaching assistants to facilitate this process.

Moodle's Quiz Tool function allowed Dr. Esfandiari to develop an automated test bank of nearly 1,500 multiple-choice statistics questions that engage students' higher order thinking skills, including application, analysis, synthesis, and evaluation. Instructors can create online quizzes by selecting test bank items based on lecture material topic and desired difficulty level. Typically, Statistics 10 instructors create two weekly quizzes. The first quiz is administered via Moodle the day after lecture, prior to the week's discussion section in order to measure student comprehension of lecture material. Teaching assistants have the ability to monitor student progress online, allowing future instruction and discussion to be tailored to the strengths and weakness of students' quiz results. They can also assess which students are progressing similarly and create compatible small groups for in-class discussions. This allows the teaching assistant to focus on the groups' needs more efficiently and encourages students to discuss their misconceptions as a group, thus further developing their knowledge through peer collaboration.

After students attend the week's discussion section, the second quiz is administered via Moodle. This quiz addresses the same concepts as the first quiz by using similar questions from the test bank, which are easily identifiable through the test bank's search function. Like the teaching assistant, the instructor then monitors student progress via performance on the second quiz and adjusts the upcoming lecture accordingly. Dr. Esfandiari's application of Quiz Tool allows instructors to consolidate their workload by automating the construction and grading of the quizzes, so there is more time to focus on reordering instruction to support student progress. It also provides an opportunity for formative evaluation at the individual student level. Immediate quiz feedback allows students to monitor their progress by identifying which concepts and procedures they need to revisit. This process helps students self-pace their learning and also enhances scaffolding capabilities by aiding students in mastering the foundational knowledge that will make it easier for them to learn new, more advanced material.

An experimental study was designed to investigate the educational effectiveness of blending standard in-class teaching methods with Moodle's Quiz Tool when teaching introductory statistics to a large group of students (100 or more). For the purpose of this study, educational effectiveness was defined by a student's ability to apply statistical principles to solve or interpret real world questions versus simply mastering statistical formulas. This included the ability for higher order thinking such as application, analysis, synthesis, and evaluation. In addition to the study's overarching goal of determining the educational effectiveness of blended instruction, there were other operational objectives to consider. Nearly 2,000 students enroll in Statistics 10 annually, so the impact on teaching loads is great. As such, the study also addressed the logistics of accommodating large numbers of students without sacrificing learning or hands-on instructional support. Direct and indirect assessment methods were employed to evaluate knowledge-based and affective measures of student progress.

The study involved two separate Statistics 10 courses; one served as the experimental group and the other as a control group. Every possible effort was made to identify and control for variables that could skew the study's findings. However, it proved challenging in this course to create a controlled learning environment where the same lessons were taught with absolutely no technology component since without technology aids, certain critical aspects of the standard curriculum would be impossible to implement. In particular, it would be inordinately time-consuming to assess

student progress within such large courses without online weekly quizzes. It was determined, therefore, that the control group would have the choice to complete similar weekly practice quizzes; however, they would not experience the customized discussion groups based on monitored progress, which were critical to the experimental approach.

At the end of the term, students from both the experimental and control groups were surveyed about their impressions of how, and why, they developed understanding throughout the course. Attendance, homework, student interactions, active learning, memorization, knowledge application, and critical thinking elements were all addressed. Students also completed a final examination to assess learning outcomes that ranged from solving mathematical equations to evaluating real world cases.

Overall, the findings supported Dr. Esfandiari's premise that blended instruction would foster student reflection and self-generated learning and lead to higher order thinking. For example, students from the experimental and control groups performed equally well when asked to respond to open-ended questions that related to hypothesis testing calculations. However, experimental group students performed much better than control group students on open-ended questions that related to the Central Limit Theorem, which involved analysis and evaluation. When control group students responded to these questions they were able to use the correct statistical terminology to describe the problem, but they were unable to elaborate on what the terminology meant.

The experimental group's perceptions of the generative nature of lecture, lab, homework, quiz, and group discussion of the quiz also differed significantly from the control group's learning experience. When asked to rank the factors that enhanced their knowledge generating capacity, experimental-group students indicated that online quizzes ranked highest, followed by class discussions, assigned homework, laboratory, and lecture. When asked what led to enhancing their ability to apply statistical principles, they credited the very tools and active learning techniques that had compelled Dr. Esfandiari to restructure Statistics 10, using Moodle to incorporate blended instruction.

Based on these findings, Dr. Esfandiari worked with other faculty in the Department of Statistics to implement blended instruction for all Statistics 10 courses. She has revised all syllabi to reflect the course objectives and expected learning outcomes, and all instructors and teaching assistants now also explain to students the motivation behind generative learning. In addition, Dr. Esfandiari has developed a peer mentoring system for experienced teaching assistants to support new teaching assistants in learning how to teach in the new format. Finally, she continues to improve the test bank by expanding the scope of the questions, while regularly assessing the tool's effectiveness for instructional purposes.

Developing and Assessing Information Literacy Across Disciplines

In this final section of our Educational Technology essay, we highlight UCLA's efforts to develop and assess information literacy through the [Information Literacy Program](#)²⁹, which has been developed by UCLA Librarians for undergraduate and graduate students. We then focus on a pilot study that examines the information literacy development of entering students enrolled in the [Freshman Cluster Program](#)³⁰ during the past two years.

The Library's Information Literacy Program

UCLA faculty expect students to master information skills that will increase their capacity for conducting research in general education and major courses, as well as facilitate lifelong learning.

Toward that end, UCLA librarians have created an Information Literacy Program to develop requisite abilities and skills. Under this program, librarians define an information-literate undergraduate student at UCLA as one who can:

- articulate an information need clearly, search effectively for and find sources to meet that need, and evaluate both the sources and the information provided for authority and relative worth;
- synthesize materials to create a suitable product, such as a research paper or presentation, that properly credits all sources and research partners;
- understand how research is produced in his or her major; and
- discuss important societal issues regarding information access and new information technologies.

Librarians work with faculty to help students meet information literacy expectations. Librarians also create online tutorials, research guides, tip sheets, workshops, and courses, such as “Research Information Literacy,” a two-unit course designed to assist students who plan to conduct a major research project in the behavioral and social sciences. Although most programs are tailored specifically for undergraduate students, librarians also provide guidance for graduate students.

The challenge to helping students develop requisite information literacy skills is compounded by the dynamic nature of informational databases and technology, variations in emphasis among disciplines, and cost-efficiency challenges. In 2007-08, librarians conducted 368 face-to-face information literacy sessions, involving over 6,000 undergraduate students. Table 3 illustrates that most students (70%) reached through Library instruction are in the humanities and social sciences, or associated with special programs. At present, the English Composition (Writing Programs) and UCLA’s Freshman Cluster Program are the predominant users.

Table 3. Information Literacy Activities among Various Departments and Programs

Department or Program	Students	Sessions
English Composition (Writing Programs)	1,124	101
Freshmen Cluster Program	996	37
Sociology	629	19
Communication Studies	361	18
Anthropology	288	20
History	183	11
Ancient Near East	181	9
Information Studies	157	56
Athletics Tutorials	84	13
College Honors Collegium	74	15
English as a Second Language	54	5
Freshman Summer Program/Transfer Summer Programs	52	3
Totals	4,183	307

In an effort to broaden earlier approaches to promoting information literacy, a blend of online and in-class instruction was built into the yearlong interdisciplinary Freshman Cluster Program courses

(included in Table 3.) The Clusters enroll roughly half of all incoming freshmen, and provide a learning environment that ensures an emphasis on developing information literacy occurs early in a student's undergraduate experience.

Information Literacy Approaches in Freshman Clusters

Each UCLA freshman cluster consists of about 200 students, a teaching cohort of faculty and advanced graduate students, and an instructional support network including librarians and writing consultants. These courses provide purposeful opportunities for students to develop research skills early in their college careers. Spring quarter culminating seminars enable students to solidify these newly acquired skills.

In Spring 2008, instructors of four spring cluster seminars teamed with librarians and assessment professionals to conduct a [study](#)³¹ to determine whether students were meeting information literacy expectations through the revised general education curriculum. Evaluating instructional processes and student competency levels were primary goals.

Three tools were used to assess student information literacy. The first was the UCLA Library's [Road to Research](#)³² online tutorial, which is a collaborative tutorial/instructional process coordinated between librarians and instructors that directly measured students' information literacy skills at course entry (pre-test) and completion (post-test). Once students completed the pre-test, they proceeded to interactive, online tutorial lessons. Students also attended a mid-quarter information literacy session in the library to expand and further reinforce information literacy strategies. The second form of assessment, completed after the *Road to Research* tutorial, was an annotated bibliography assignment that required students to clearly describe their use of relevant search engines and databases along with the search strategies they used to support the utility of these sources. A common grading rubric based on search and discovery task completion, as well as content analysis competence, provided consistent grading standards for each seminar. An end-of-course evaluation that asked students to self-assess their annotated bibliography assignment performance and evaluate their *Road to Research* experience provided the third assessment tool.

Students' *Road to Research* scores roughly paralleled their annotated bibliography scores, and the students' end-of-course evaluations suggested that both activities were useful. Additionally, instructors and librarians observed changes in students' awareness and application of information literacy methods that were reflected in their annotated bibliography assignments and final research papers. Further, it became clear that the use of educational technology for information literacy required intentional efforts to orient instructors and students to that technology.

Initially, it was unclear how to best coordinate instructor and librarian efforts. The strategy used in the first year of the study was to have both librarians and instructors review students' annotated bibliography assignments to produce two unique rubric-based scores. This approach had the strength of generating large amounts of rich student performance data. However, the process was time intensive, making it less practical for large-scale application. An additional challenge with this approach was the substantial difference in instructors' and librarians' areas of expertise. To increase effectiveness, librarians felt they needed to develop additional content knowledge, and instructors felt they needed to acquire more information literacy knowledge.

The second year of the study focused on ways to consolidate the assessment tools and expand implementation. The *Road to Research* was used again and administered at the beginning and end of the course. The end of course evaluation was also re-employed but was refined to ask questions

directly related to the core components of information literacy: locating, evaluating, and applying research information resources. In place of the annotated bibliography assignment, an existing course assignment was used to assess students' applied information literacy. Librarians' role shifted from directly assessing students' work to training instructors in how to measure information literacy. This greatly reduced the librarians' overall time commitment and suggested that the project could efficiently scale upwards. A final change in the second year was the use of six seminars from one cluster to facilitate greater measurement reliability. The Center for Educational Assessment has posted a [report](#)³³ for the two-year study, along with the measurement tools and evaluation rubrics developed for cluster freshmen.

Interpreting assessment findings has been complicated by inconsistent results. For example, in some seminars, students and faculty consistently perceived the *Road to Research* tutorial as a useful, integrated assessment mechanism. In others, students and faculty alike expressed mixed feelings about the tutorial or provided inconsistent evaluations of its merits. Variation was also evident in students' perspectives on when and how direct interaction with librarians was most helpful. Overall, findings to date suggest that additional efforts are needed to provide consistent and universal information literacy skill development opportunities to *all* UCLA students, and to do so in a cost- and time-efficient manner.

Looking to the Future

UCLA's longstanding commitment to excellence in undergraduate education provides a strong foundation upon which we can build new initiatives to enhance teaching and enrich student learning. As detailed in this essay, we view the effective use of technology as a core component of our educational effectiveness mission. As noted at the outset, our continued efforts in this area are anchored by an increasingly cohesive instructional environment, highly collaborative design and implementation efforts, and creative leadership. The new fiscal realities we face (described in *Essay A*) underscore the importance of proceeding thoughtfully in evaluating the merits of various approaches to incorporating educational technology and determining how to use available resources in the most educationally sound, and cost effective ways.

Our campus community has made good progress in establishing common solutions for educational technology issues, including creating effective teaching spaces, understanding student perspectives, and creating the CCLE. Taken together, the examples highlighted in this essay provide valuable insights that will inform future technology-enhanced educational efforts. Fundamentally, our work to date demonstrates the importance of establishing an institutional infrastructure that supports multiple individual efforts; enables careful assessment and evaluation of those efforts; and provides opportunities for colleagues to share ideas and learn from each other's experimental pedagogical undertakings. As we envision our technology-related educational enhancement priorities, continued efforts to understand our students' abilities, needs, and perspectives and to engage them actively and innovatively in their own learning processes also figure very prominently.

By ensuring that we incorporate these key components as future plans evolve, we will be well positioned to identify which educational technology approaches have universal merit for enhancing undergraduate education, and which are best uniquely tailored for selected types of study and/or student preparedness levels. We will also be increasingly well prepared to support faculty in developing and applying new technology tools and engaging in data-based examinations of how those technologies impact educational effectiveness.

CLOSING COMMENTS

The Western Association of Schools and Colleges (WASC) asserts that the primary goal of the Educational Effectiveness Review is to “invite sustained engagement by the institution on the extent to which it fulfills its educational objectives.” UCLA has accomplished this goal in numerous ways, and we close this report by summarizing our efforts under each of the four purposes specified in the 2008 [WASC Handbook](#)¹.

Purpose 1. To review institutional efforts to evaluate the effectiveness of educational programs, with special attention to the institution’s program of review process.

When UCLA began preparation for its reaccreditation in 2004, we were guided by the 2001 *WASC Handbook*, which gave no special attention to program reviews in *Purpose 1*. The underlined phrase was added for the newly issued 2008 *WASC Handbook*. However, as we conceptualized UCLA’s [Institutional Proposal](#)² for reaccreditation, there was early agreement to include an essay that would highlight the Academic Senate’s Program Review process; this developed into [Essay 2](#)³ of our *Capacity* report. The WASC Site Visit Team noted in their [report](#)⁴ to the Commission that “UCLA has a well-established process of periodic program review that is characterized by a high degree of faculty ownership,” and aptly summarized our process:

Each review encompasses a year of self-study, using data supplied by institutional research, followed by a site visit by a team consisting of UCLA faculty and external reviewers, and a well-structured follow-up process (response, progress review, and closure). Illustrative reviews were shared with the team, which indicated that the outcomes of the reviews are substantive (including sanctions) and engage faculty judgments on elements of curriculum design and revision as well as resources and productivity. One of its particular strengths is the capacity for the Academic Senate to make the recommendation of receivership which speaks to the fact that the oversight process is a genuine and respected one, and not simply one in which an institution “goes through the motions” with little real meaning or consequence.

In *Essay B* of this report, we updated the Academic Senate’s efforts to expand the assessment of educational effectiveness, which has always been fundamental to the program review process. New guidelines, to be implemented beginning in 2010-11 by the Graduate Council and the Undergraduate Council, ask faculty to state expected learning outcomes for each program, discuss efforts to assess students’ achievement of those outcomes, and describe changes made as a result of that evaluation. We also include a timeline for implementing these new requirements.

Purpose 2. To examine institutional practices for evaluating student learning and to develop and share good practices for using educational results to improve the process of teaching and learning.

UCLA has a long history of creating a culture of evidence and using findings to facilitate improvement in teaching, research, and service. We reviewed our comprehensive approach to evaluating learning and teaching in *Essay B*. Our institutional assessment of educational effectiveness is organized around three focal points: 1) a focus on students: evaluating performance and understanding perspectives; 2) a focus on individual courses: evaluating instruction and student learning; and 3) a focus on programs: evaluating learning and performance indicators. In *Essay B*, we summarized UCLA’s approaches to each of these and gave specific examples of assessment projects in the two theme essays. In *Essay A*, we introduced the campus strategic [proposal](#)⁵ for *Transforming UCLA for the Twenty-first Century*. This document includes specific action plans that will be assessed annually as the campus advances its

efforts to foster new forms of collaborative, multidisciplinary research and teaching, expand problem-based teaching and research through local and international engagement, and become a more residential academic community.

Purpose 3. To examine the alignment of institutional resources with activities designed to achieve the institution's educational objectives.

UCLA has developed a strong tradition of aligning institutional resources to meet the academic strategic plans and educational objectives of our faculty and deans. This decentralized approach to planning has been very effective during times of growth, when state funds are increasing and student populations are expanding. But during times of fiscal challenge, UCLA has looked more to central planning. This was true in the early 1990s when financial crisis led to the “Professional Schools Restructuring Initiative” and again, at the beginning of this century, when the campus was guided by (then) Chancellor Albert Carnesale’s 2001-02 initiatives. Now, as the campus faces even greater fiscal challenges, Chancellor Gene Block and EVC/Provost Scott Waugh have proposed a [strategic plan](#)⁶ for transforming UCLA. The plan articulates institutional objectives, provides a framework for academic investment, and establishes a set of campus wide strategic actions that guide our educational efforts through the next decade.

The proposed plan emerges from four principles designed to: 1) ensure financial security; 2) ensure UCLA’s academic excellence; 3) facilitate civic engagement; and 4) increase diversity and foster scholarship related to diversity. The proposal also articulates action plans for each of these principles. Within the first, ensuring academic excellence, several action plans focus on themes developed as part of UCLA’s reaccreditation process; these include assessing learning outcomes, continuing the development of capstone opportunities for undergraduate students, expanding capacity in educational technology, improving teaching space, and facilitating interdisciplinary education and research.

Purpose 4. To promote sustained engagement with selected issues of educational effectiveness consistent with Commission Standards. These issues [“themes”] will have already been identified by the institution and approved through the proposal review process. The institution is encouraged to select issues of importance to itself in the process, so that the review will be of maximum value to the institution.

In our [Capacity report](#)⁷, UCLA presented rationales and strategic approaches for three themes that were identified in our *Institutional Proposal*. Each was selected by UCLA’s reaccreditation [Steering Committee](#)⁸ because of its importance to the faculty and its potential for sustained engagement that would enhance our institution’s educational effectiveness. In *Essay C* on UCLA’s Capstone Initiative, we discussed our progress and future plans to engage interested departments in capstone discussions, with a decade-long goal of broadening substantially the availability of undergraduate capstone experiences. In *Essay D* on UCLA’s Educational Technology Initiatives, we examined new technological practices with optimism tempered by our understanding that enhancements to learning, as opposed simply to changes in teaching, are difficult to quantify. In *Essay A*, we placed our third WASC theme, “Facilitating Interdisciplinary Education and Research,” in a broader context given that it emerged as a cornerstone of the recent campus plan to transform UCLA for the twenty-first century.

As we prepare for our next WASC reaccreditation eight to ten years from now, we will also be in the midst of celebrating our centennial. This celebration and the pending review will encourage us to reflect both on our achievements and on the challenges that remain in promoting undergraduate capstones, educational technology, and interdisciplinary education and research.

Appendix 1

An Annotated Endnote Chart

The Annotated Endnote Chart includes a URL listing for each dataset, document, and website cited in the text. We provide this listing for those reading the report offline. For the electronic version, each endnote is hyperlinked. We include many of the documents and datasets as evidence of UCLA's commitment to educational effectiveness; still others provide the reader with archival and supplemental information about key topics featured.

An Annotated Endnote Chart for UCLA's *Educational Effectiveness Review Report*

In the left column, the # = endnote number for each essay.

Endnotes for the <i>Introduction</i>	
#	Document, Data, Website, or Comment
1	Document: UCLA's <i>Institutional Proposal</i> (May 2006) for WASC Reaccreditation: http://www.wasc.ucla.edu/UCLA-Institutional-Proposal-to-WASC.pdf
2	Document: UCLA's <i>Capacity and Preparatory Review Report</i> (December 2007) for WASC Reaccreditation: http://www.wasc.ucla.edu/CPR_Final.pdf
3	Document: Report of the WASC Visiting Team for the Capacity and Preparatory Review (visit held at the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf
4	Document: UCLA's Response to the Report of the WASC Visiting Team for the Capacity and Preparatory Review (January 2, 2009); http://www.wasc.ucla.edu/UCLA_Response.pdf
5	Document: Letter from Ralph A. Wolff, President and Executive Director Accrediting Commission for Senior Colleges and Universities (February 27, 2009), notifying Chancellor Gene Block that the <i>Capacity and Preparatory Review Report</i> had been received and the "accreditation of the University of California, Los Angeles" was to "continue with the Educational Effectiveness Review visit for spring 2010": http://www.wasc.ucla.edu/2009_Commission_Letter.pdf
6	Document: <i>Transforming UCLA for the Twenty-first Century</i> , 2009 is the draft of the campus Academic Plan that sets forth a framework for the next decade: http://evc.ucla.edu/reports/academic-plan/
7	Document: <i>Handbook of Accreditation</i> , Western Association of Schools and Colleges (2008 edition): http://www.wascsenior.org/findit/files/forms/Handbook_of_Accreditation_2008_with_hyperlinks.pdf
8	Data: Summary Data Form of data requested by WASC; update of data provided for the Capacity and Preparatory Review: http://www.wasc.ucla.edu/eer_endnotes/Data_Summary_Form.pdf
9	Data: WASC Exhibit 7.1 – <i>Inventory of Educational Effectiveness Indicators</i> : http://www.wasc.ucla.edu/eer_endnotes/Exhibit_7.1.pdf
10	Data: WASC Exhibit 8.1 - <i>Inventory of Concurrent Accreditations</i> for UCLA's Professional Schools: http://www.wasc.ucla.edu/eer_endnotes/Exhibit_8.1.pdf
11	Data: UCLA's comprehensive Data Portfolio developed for the WASC <i>Capacity and Preparatory Review Report</i> (2008): http://www.aim.ucla.edu/wasc/

Endnotes for Essay A – <i>Academic Planning in a Changed Fiscal Environment</i>	
#	Document, Data, Website, or Comment
1	Document: <i>Essay 1. "Academic Strategic Planning"</i> in UCLA's <i>Report for the WASC Capacity and Preparatory Review</i> , December 2007: http://www.wasc.ucla.edu/CPR_Essay1.pdf
2	Website: EVC/ Provost's website where the document <i>Transforming UCLA for the Twenty-first Century</i> , 2009 is posted: http://evc.ucla.edu/reports/academic-plan/
3	Website: Information from UC Office of the President about the employee furlough plan for 2009-10: http://www.universityofcalifornia.edu/budget/?page_id=87
4	Document: Budget Toolbox Project Report from the Academic Programs Taskforce: <i>Reducing the Cost of UCLA's Academic Programs</i> (April 24, 2009): http://evc.ucla.edu/reports/toolbox_academic.pdf
5	Document: Budget Toolbox Project Report from the Cost Savings and Efficiencies Taskforce (Interim Report - April 24, 2009): http://evc.ucla.edu/reports/toolbox_savings_efficiencies.pdf
6	Document: Budget Toolbox Project Report from the Revenue Taskforce (April 24, 2009): http://evc.ucla.edu/reports/toolbox_revenue.pdf

7	Document: Letter from EVC/Provost Scott L. Waugh to UCLA deans and department chairs about the implementation of 2009-10 budget cuts related to academic programs (July 2, 2009) : http://www.wasc.ucla.edu/eer_endnotes/EVC_Memo_Budget_Reductions.pdf
8	Document: <i>Essay 7 of UCLA's Capacity and Preparatory Review Report</i> , "Facilitating Interdisciplinary Education and Research": http://www.wasc.ucla.edu/CPR_Essay7.pdf
9	Document: <i>Essay 3 of UCLA's Capacity and Preparatory Review Report</i> , "UCLA's Commitment to Diversity": http://www.wasc.ucla.edu/CPR_Essay3.pdf
10	Website: Chancellor Gene Block's diversity statement on UCLA's Diversity Website: http://www.diversity.ucla.edu/
11	Document: Draft of <i>UCLA's Diversity Plan</i> : Fall 2009: http://www.diversity.ucla.edu/strategicplan/index.htm
12	Document: Report of the WASC Visiting Team for the Capacity and Preparatory Review (visit held at the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf
13	Website: <i>University of California 2009 Accountability Report</i> has 113 indicators across 15 categories: http://www.universityofcalifornia.edu/accountability/

Endnotes for Essay B – UCLA's Approaches to Evaluating Educational Effectiveness	
#	Document, Data, Website, or Comment
1	Document: UCLA's <i>Institutional Proposal</i> (May 2006) for WASC Reaccreditation: http://www.wasc.ucla.edu/UCLA-Institutional-Proposal-to-WASC.pdf
2	Document: UCLA's <i>Capacity and Preparatory Review Report</i> (December 2007) for WASC Reaccreditation: http://www.wasc.ucla.edu/CPR_Final.pdf
3	Website: Annual report for the College Senior Survey (2008): http://www.college.ucla.edu/seniorsurvey/
4	Data: Samples of data Summary Sheets for the 2008 Senior Survey results that are provided to departments and the Undergraduate Council: http://www.wasc.ucla.edu/eer_endnotes/Senior_Survey_Sample_Data.pdf
5	Website: Evaluation of Instruction Program (EIP) of the Office of Instructional Development: http://www.oid.ucla.edu/units/eip
6	Document: The standard Evaluation of Instruction survey provided by EIP for the assessment of teaching: http://www.wasc.ucla.edu/eer_endnotes/EIP_Survey.pdf
7	Document: The course evaluations forms developed for the Freshman Cluster lectures and the Freshman Cluster seminars: http://www.wasc.ucla.edu/eer_endnotes/Sample_Cluster_Evaluations.pdf
8	Document: <i>Essay 4 of UCLA's Capacity and Preparatory Review Report</i> "Ten Years of Education Reform at UCLA": http://www.wasc.ucla.edu/CPR_Essay4.pdf
9	Document: <i>Guide to the Documentation of Effective Teaching</i> – UCLA CALL Appendix 3: http://www.apo.ucla.edu/call/append3.htm
10	Document: <i>Essay 2 of UCLA's Capacity and Preparatory Review Report</i> "Academic Senate Review and Educational Effectiveness": http://www.wasc.ucla.edu/CPR_Essay2.pdf
11	Document: <i>Guidelines for Developing and Assessing Student Learning Outcomes for Undergraduate Majors</i> by Jennifer Lindholm, 2009: http://www.wasc.ucla.edu/eer_endnotes/Learning_Outcomes_Guidelines.pdf
12	Website: UCLA's Department of Electrical Engineering (Henry Samueli School of Engineering and Applied Science) website that includes information for undergraduate students about program outcomes, assessment tools and procedures, and course objective and outcome forms: http://www.ee.ucla.edu/Accreditation-outcomes.htm
13	Data: Undergraduate Programs with Completed Inventories for Educational Effectiveness Indicators (Exhibit 7.1A): http://www.wasc.ucla.edu/eer_endnotes/7.1A_Completed_Inventories.pdf
14	Data: Timetable for completing Inventories for Educational Effectiveness Indicators for new Capstone Majors and non-capstone majors (Exhibit 7.1B): http://www.wasc.ucla.edu/eer_endnotes/7.1B_Inventory_Timetable.pdf

15	Document: Examples of UCLA General Catalog entries for Capstone Majors and Capstone Programs publicizing capstone opportunities and learning outcomes associated with these experiences: http://www.wasc.ucla.edu/eer_endnotes/Capstones_General_Catalog.pdf
16	Website: Department of Materials Science and Engineering showing examples of student learning outcomes: http://www.seas.ucla.edu/ms/MSE_Objectives.htm
17	Document: <i>Standards and Procedures for Graduate Study at UCLA</i> , updated in August 2008 and posted on the Graduate Division website: http://www.gdnet.ucla.edu/gasaa/library/spfqs.pdf
18	Data: WASC Exhibit 7.1C – Inventory for Educational Effectiveness for Graduate Degree Programs: http://www.gdnet.ucla.edu/gasaa/library/wascintro.htm
19	Data: WASC Exhibit 8.1–Inventory of Concurrent Accreditation and Key Performances Indicators for Accredited Programs: http://www.wasc.ucla.edu/eer_endnotes/Exhibit_8.1.pdf
20	Document: <i>The Academic Senate Program Review Process Manual 2009-10</i> ; see section on Guidelines for Self Reviews – Undergraduate Programs: http://www.senate.ucla.edu/programreview/documents/ProgramReviewManual2009-10.pdf
21	Draft Document: On October 8, 2009, Henry C Powell of the UC Academic Council, provided a report “UC Way to Educational Effectiveness” (July 2009) of the Undergraduate Educational Effectiveness Task Force, and requested that UC campuses review the draft and provide comment by January 4, 2010. http://www.wasc.ucla.edu/eer_endnotes/UC_Way_to_Educational_Effectiveness.pdf

Endnotes for Essay C –UCLA’s Capstone Initiative: Engaging Students in Creative Discovery

#	Document, Data, Website, or Comment
1	Document: UCLA <i>Institutional Proposal</i> for WASC Reaccreditation (May 2006): http://www.wasc.ucla.edu/UCLA-Institutional-Proposal-to-WASC.pdf
2	Document: Report of the WASC Visiting Team Capacity and Preparatory Review (Oct 6-8, 2008 Site Visit at UCLA), Dec 2008: http://www.wasc.ucla.edu/Visit_Team_Report.pdf
3	Document: <i>Essay 5</i> in UCLA Report for the WASC Capacity and Preparatory Review “Shaping Undergraduate Education via the Capstone Experience.”: http://www.wasc.ucla.edu/CPR_Essay5.pdf
4	Document: Letter to department chairs from Stuart Brown (Chair, Undergraduate Council) and Raymond Knapp (Chair, Capstone Workgroup) inviting them to join the capstone initiative; March 18, 2008: http://www.wasc.ucla.edu/eer_endnotes/Sample_Capstone_Invitation_Letter.pdf
5	Document: Survey for Capstone Requirement sent to chairs of undergraduate programs that currently had experiences that were thought to meet the UCLA Capstone Model March 19, 2008: http://www.wasc.ucla.edu/eer_endnotes/Capstone_Survey.pdf
6	Document: Letter from Raymond Knapp (Chair, Capstone Workgroup) to Dorothy Wiley (Chair, Undergraduate Council) presenting a slate of 29 programs seeking Capstone Major certification October 16, 2008: http://www.wasc.ucla.edu/eer_endnotes/Letter_Seeking_Capstone_Major_Certification.pdf
7	Document: Sample of “Capstone Application” materials: http://www.wasc.ucla.edu/eer_endnotes/Sample_Capstone_Application.pdf
8	Document: Email from Chair Raymond Knapp (Capstone Workgroup) and Judith Smith (Vice Provost for Undergraduate Education) requesting a memo attesting the faculty engagement in reviewing the capstone application material; October 20, 2008: http://www.wasc.ucla.edu/eer_endnotes/Request_Faculty_Engagement_Memo.pdf
9	Data: Summary and Timetable for the Certification of Capstone Majors at UCLA: http://www.wasc.ucla.edu/eer_endnotes/Capstone_Summary_Table.pdf

10	Website: Information about the UCLA Senior Survey: http://www.college.ucla.edu/seniorsurvey/
11	Document: UCLA Senior Survey and Students' Impressions of Capstone Experiences in the College; Dr. Jennifer Lindholm (unpublished research study; November 2008): http://www.wasc.ucla.edu/eer_endnotes/Capstone_Senior_Survey_Student_Impressions.pdf
12	Document: Letter and 87 questionnaires sent to chairs of departments and programs requesting that they consider becoming a Capstone Major or establishing a Capstone Program; sent February 23, 2009 from Raymond Knapp (Chair, Capstone Workgroup) and Dorothy Wiley (Chair, Undergraduate Council): http://www.wasc.ucla.edu/eer_endnotes/Sample_Establishing_Capstone_Major.pdf
13	Data: 2009 UCLA Capstone Survey Responses by academic units: http://www.wasc.ucla.edu/eer_endnotes/2009_Capstone_Survey_Responses.pdf
14	Document: Budget memo to faculty, chairs, and deans from EVC/Provost Scott Waugh on the effect of state budget reductions on academic programs; July 2, 2009: http://www.wasc.ucla.edu/eer_endnotes/EVC_Memo_Budget_Reductions.pdf
15	Document: Examples of capstone text for sample departments prepared for the 2010 UCLA General Catalog: http://www.wasc.ucla.edu/eer_endnotes/Capstones_General_Catalog.pdf
16	Website: UCLA's Department of Electrical Engineering (Henry Samueli School of Engineering and Applied Science) website that includes information for undergraduate students about program outcomes, assessment tools and procedures, and course objective and outcome forms: http://www.ee.ucla.edu/Accreditation-outcomes.htm
17	Document: An advising <i>check sheet</i> designed for Music History majors that is posted online; the capstone requirement is clearly indicated: http://www.musicology.ucla.edu/images/stories/documents/checksheet.pdf
18	Data: Undergraduate Programs with Completed Inventories for Educational Effectiveness Indicators (Exhibit 7.1A): http://www.wasc.ucla.edu/eer_endnotes/7.1A_Completed_Inventories.pdf

Endnotes for Essay D – UCLA's Educational Technology Initiatives: Enhancing Learning and Teaching	
#	Document, Data, Website, or Comment
1	Website: Reports of the Information Technology Planning Board (ITPB): http://www.itpb.ucla.edu/documents/
2	Document: <i>UCLA IT Strategic Plan: 2009-2018</i> : http://evc.ucla.edu/reports/it_strategic_plan_093009.pdf
3	Document: <i>Essay 6</i> in UCLA's Report for the WASC Capacity and Preparatory Review "Using Educational Technology to Enhance Learning and Teaching": http://www.wasc.ucla.edu/CPR_Essay6.pdf
4	Document: Report of the WASC Visiting Team for the Capacity and Preparatory Review (visit held at the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf
5	Website: Office of Instructional Development's website listings for Audio Visual Services for major general classrooms: http://www.oid.ucla.edu/units/avs/buildings
6	Document: Office of Instructional Development report on UCLA General Assignment Classroom Business Plan: http://www.oid.ucla.edu/units/ctdm/busplan
7	Website: Classroom Design Standards: http://www.oid.ucla.edu/edtech/uclaclassrooms
8	Document: Classroom Annual Report: http://www.oid.ucla.edu/edtech/uclaclassrooms/classreports/index.html
9	Website: UCLA's Visualization Portal is a 40-seat theater with up-to-date virtual reality technologies located on the 5th floor of the Math Science Building. The facility is literally a portal into other times, places, and experiences: http://www.ats.ucla.edu/portal/about_the_portal/default.htm

10	Website: College Library Information and Computing Commons (CLICC) annual student surveys: http://staff.clicc.ucla.edu/tiki-index.php?page=SurveyResults
11	Website: College of Letters and Science Instructional Enhancement Initiative (IEI): http://www.college.ucla.edu/iei
12	Website: MyUCLA portal: http://my.ucla.edu/
13	Website: Institute for Social Research: http://www.issr.ucla.edu/
14	Website: Center for Embedded Network Sensing: http://research.cens.ucla.edu/
15	Website: Institute for Digital Research and Education (IDRE) is a cooperative of faculty and technologists working to advance the existing body of computing expertise at UCLA. IDRE supports research and innovative scholarship, taking advantage of new technologies, and encouraging interdisciplinary collaboration on new research questions: http://www.idre.ucla.edu/about/
16	Website: Office of Instructional Development <i>BruinCast</i> program: http://www.oid.ucla.edu/faculty/bruinacast
17	Website: Instructional Development and student surveys on <i>BruinCasting</i> (completed quarterly): http://www.oid.ucla.edu/webcasts/courses/survey/report
18	Website: Cooperative Institutional Research Program (CIRP) Freshman Survey: http://www.qseis.ucla.edu/heri/cirpoverview.php
19	Data: UCLA Senior Survey, 2007: http://www.college.ucla.edu/seniorsurvey/07/
20	Website: Faculty Committee on Educational Technology (FCET): http://www.oid.ucla.edu/edtech/fcet/
21	Website: Common Collaboration and Learning Environment Initiative (CCLE) reports: http://www.oit.ucla.edu/ccle/default.htm
22	Website: Committee on Information Technology Infrastructure (CITI) is appointed by the Executive Vice Chancellor and committee members are academic and administrative directors responsible for business and fiscal aspects of IT applications and infrastructure. CITI is responsible for strategic and tactical planning, operational policy, and business and cost allocation models; for more information see: http://www.citi.oit.ucla.edu/
23	Document: Report of the WASC Visiting Team Capacity and Preparatory Review to the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf
24	Document: CCLE Planning Team's five-year Implementation Plan: http://www.oit.ucla.edu/ccle/docs/20070921_CCLE_Planning_Team_Final_Report.pdf
25	Document: CCLE Annual Report: http://www.oid.ucla.edu/publications
26	Data: Survey results from students and faculty respondents in CCLE managed courses (2009): http://www.wasc.ucla.edu/eer_endnotes/CCLE_Survey.pdf
27	Website: UCLA Center for Digital Humanities: http://www.cdh.ucla.edu/
28	Comment: <i>Introduction to Statistical Reasoning</i> (5 units): lecture, three hours; discussion, one hour; computer laboratory, two hours. Preparation: three years of high school mathematics. Introduction to statistical thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.
29	Website: UCLA Library Information Literacy Program: http://www.library.ucla.edu/service/6342.cfm
30	Document and Website: For more information about Freshman Clusters, see <i>Essay 4</i> of UCLA's Capacity report: http://www.wasc.ucla.edu/CPR_Essay4.pdf and the website for the UCLA Freshman Cluster Program: http://www.college.ucla.edu/ge/clusters/index.html
31	Comment: To prepare for this study, the Vice Provost for Undergraduate Education sent a team to the WASC Retreat on Student Learning and Assessment, Oct 18 - 20, 2007. The topic the team discussed was "Information Literacy and Freshman Clusters" and the UCLA team included: Alison Armstrong, Director of Undergraduate Initiatives; Cheryl Bartel, Interim Head, Research, Instruction & Collection Services, Biomedical Library; Jeffrey Decker, Instructional Coordinator, Freshman Cluster Program; Adjunct Associate Professor of English Joanne Damon Rodriguez, Professor of Public Affairs and Coordinator of the Cluster on <i>Frontiers in Human Aging: Biomedical, Social, and Policy Perspective</i> ; Amy Fann, Post Doctoral Scholar, Center for Educational Assessment; Esther Grassian, Interim Head College Library; and Marc Levis-Fitzgerald, Director, Center for Educational Assessment.

32	Website: <i>Road to Research</i> , online tutorial offered by the UCLA Library for undergraduate students: http://www.sscnet.ucla.edu/library/tutorial.php
33	Document: Report of a two-year study conducted by the Center of Educational Assessment, Division of Undergraduate Education (September 2009) assessing the information literacy skills of freshmen in interdisciplinary Cluster courses : http://www.wasc.ucla.edu/eer_endnotes/Info_Lit_Report.pdf

Endnotes for Closing Comments	
#	Document, Data, Website, or Comment
1	Document: <i>Handbook of Accreditation</i> , Western Association of Schools and Colleges (2008 edition): http://www.wascsenior.org/findit/files/forms/Handbook_of_Accreditation_2008_with_hyperlinks.pdf
2	Document: UCLA's <i>Institutional Proposal</i> (May 2006) for WASC Reaccreditation: http://www.wasc.ucla.edu/UCLA-Institutional-Proposal-to-WASC.pdf
3	Document: <i>Essay 2</i> in UCLA's Report for the WASC Capacity and Preparatory Review "Academic Senate Review and Educational Effectiveness": http://www.wasc.ucla.edu/CPR_Essay2.pdf
4	Document: Report of the WASC Visiting Team for the Capacity and Preparatory Review (visit held at the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf
5	Document: <i>Transforming UCLA for the Twenty-first Century</i> , 2009 is the draft of the campus Academic Plan that sets forth a framework for the next decade: http://evc.ucla.edu/reports/academic-plan/
6	Document: <i>Transforming UCLA for the Twenty-first Century</i> , 2009 is the draft of the campus Academic Plan that sets forth a framework for the next decade: http://evc.ucla.edu/reports/academic-plan/
7	Document: UCLA's <i>Capacity and Preparatory Review Report</i> (December 2007) for WASC Reaccreditation: http://www.wasc.ucla.edu/CPR_Final.pdf
8	Document: Charge letter from Chancellor Albert Carnesale to UCLA's Institutional Proposal Steering Committee responsible for envisioning UCLA's <i>Institutional Proposal</i> for the WASC reaccreditation (December 17, 2004): http://www.wasc.ucla.edu/Proposal-Steering-Charge.pdf

Appendix 2

UCLA's Response to the Report of the Site Visit Team

Appendix 2 includes a chart that lists recommendations from the Site Visit Team Report (posted at http://www.wasc.ucla.edu/Visit_Team_Report.pdf) and summarizes UCLA's responses, or references the response discussed in the essays of the *Educational Effectiveness Review Report*.

Appendix 2
UCLA’s Response to the Report of the Site Visit Team

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA’s Response
9-10	The reviews that were initiated in 2006-07 requested that programs provide program educational goals and assessment. The responses provided by the cohort of 10 programs indicated that faculty saw themselves as drawing on multiple sources of evidence on how students were meeting expectations for learning (<i>Essay 2</i> , p. 14). Some of the responses also indicated that further assistance was needed in clarifying program goals in terms of learning outcomes, and that is being provided. Our understanding is that a revised program review process incorporating the requirement of learning objectives and assessments is nearing final approval by the Senate. We expect to see the results as part of the Educational Effectiveness Review.	UCLA’s Academic Senate Program Review process has been amended to include both the articulation and the assessment of learning outcomes for both capstone and non-capstone majors. See <i>Essay B</i> for details.
10	During the EER we will wish to explore in more detail how future faculty self-studies and review committee reports will incorporate the program’s formative assessment processes into the review. What will be “acceptable” and under what conditions will follow-up be required? What will the committee do to insure that when a department returns after eight years for another review that substantial progress will have been made in assessment?	Under the new guidelines noted above, faculty are asked to: “ <i>Discuss efforts made to evaluate achievement of those learning objectives either across the curriculum or among your graduating seniors. Describe any changes you have implemented in your program as a result of that evaluation.</i> ” If the faculty responsible for the major(s) under review has not implemented any evaluation, an internal review would be scheduled within a 12-month period, and the department would be expected to discuss its progress. If evaluation is presented in the self-review report, the Undergraduate Council representative(s) on the Review Team will consider the degree to which the process was adequate and, if necessary, make recommendations for improvements for the next eight-year review.
14	The mission to improve and enhance faculty diversity is apparent throughout the report. However concerns were raised during a session with faculty members from the ethnic studies units regarding the recruitment and retention of under-represented instructors and scholars. The participants believe a greater resource outlay for faculty appointments will be required in order to maintain the viability of the research and instruction these units provide.	Diversity continues to be a key principle for UCLA’s Academic Planning and the campus Diversity Plan (discussed in <i>Essay A</i>) highlights plans for increasing the diversity pipeline, from undergraduate students through to faculty members. Under the current fiscal constraints, new FTE will not be allocated and few faculty searches will be approved.

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
16-17	<p>The engagement and the substantive issues with which the [capstone] workgroup is contending impressed the team. A matter of great concern is how programs with very large numbers of students could sustain access to capstone experiences for all (or even the majority) of their major students. While the products of culminating capstone experiences can provide the basis for faculty inquiry into program level student learning outcomes, to make this the primary way of doing so runs the risk of compromising the value of the educational experience in some cases or pushing the program toward an unsustainable standard in others.</p>	<p>Some of our majors with the highest enrollments, such as History and English, have made application for capstone major status. Others will seek to establish Capstone Programs. No major will be 'pushed' into this option; as noted by the Team, we have approached the implementation of the Capstone Initiative with great care; for more details, refer to <i>Essay C</i>.</p>
17-18	<p>In reviewing the samples that have already been provided for the WASC <i>Inventory of Educational Effectiveness</i>, it is clear much time and effort has gone into the development of a systematic way to address issues of student learning in the capstone. It is unclear, however, how the learning that is demonstrated in the capstone will be used in a systematic way in program assessment.</p>	<p>The Academic Senate Review process has been amended to include both the articulation and the assessment of learning outcomes for both capstone and non-capstone majors. For details, see <i>Essay B</i>.</p>
18	<p>We strongly encourage the institution to consider addressing not only discipline-based knowledge in the capstone, but also such attributes as analytical thinking, synthesis, integration of knowledge, the use of multiple perspectives—outcomes that are shared expectations of undergraduate programs.</p>	<p>UCLA will be focusing on campus-wide learning outcomes for all undergraduate students (regardless of area of study) in the coming years. We have already articulated these for our innovative General Education program (see <i>Essay 4</i> of UCLA's <i>Capacity</i> report).</p>
19-20	<p>Three comments make a similar point:</p> <p>UCLA will need to consider, however, how it will assist faculty in the programs that ultimately do not incorporate a capstone to understand and develop learning outcomes, measure those outcomes, and use the data in meaningful ways. This should be addressed in the EER.</p> <p>Further, how does UCLA plan to assist departments in learning how to relate instruction in the curriculum to the outcomes and assess the results? This is particularly important if the Capstone Program becomes a primary means of assessing student learning in a program.</p> <p>How [will] the institution assist programs without capstones in articulating learning outcomes and assessing student learning in ways that are of value to the faculty?</p>	<p>As noted in <i>Essay B</i>, we have worked with faculty responsible for non-capstone majors to articulate learning outcomes, the assessment of which is facilitated by "curricular mapping," a technique used successfully by our Engineering faculty. Checking the alignment between a program's existing curricular offerings and expected learning outcomes is an important part of the process for clarifying <i>what</i> and <i>how</i> students are learning.</p> <p>The Vice Provost's (Undergraduate Education) assessment staff is working closely with faculty in non-capstone majors to articulate meaningful learning outcomes and a timeline for assisting all such departments is presented in Part 2C of <i>Appendix 5</i>.</p>

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
20	How will the assessment of student learning be formally incorporated into the program review process?	The Academic Senate Review process has been amended to include both the articulation and the assessment of learning outcomes for both capstone and non-capstone majors. For details, see <i>Essay B</i> .
21-22	<p>By citing the transition of Women's Studies from IDP status to an academic department the team grasps the basic mechanics needed to provide a solid institutional place for interdisciplinary programs. We take this to be a model for the process of negotiations that must ensue between departments regarding faculty workload and the meticulous manner in which faculty lines are divided between academic units to meet teaching demands. The team encourages on-going work in this area.</p> <p>The team recommends ongoing discussion in the Multidisciplinary Studies Taskforce and the Academic Senate to resolve existing administrative and curricular challenges associated with the Centers for Interdisciplinary Instruction. It is further encouraged to craft curricula whose learning goals are easily understood by students.</p>	In UCLA's new campus wide academic plan, facilitating interdisciplinary education and research will be a specific focus of our consideration of "academic excellence." The proposal includes action plans to achieve this (see <i>Essay A</i>).
23	The report cites several examples that cut across many areas of inquiry. These are centers of excellence and the team encourages ongoing support for these opportunities. As these opportunities expand, the team encourages additional work to add clarity to their institutional places.	In UCLA's new campus-wide academic plan, interdisciplinary teaching and research will be a specific focus of the faculty's consideration of "academic excellence." The plan provides a series of action plans to achieve this (see <i>Essay A</i>).
24	<p>As the university ponders its next step in the richly rewarding enterprise of interdisciplinarity, the team recommends attention to a few issues: 1) the evaluation of interdisciplinary education and research for faculty advancement, 2) course development and pedagogical support for faculty anticipating teaching interdisciplinary and team-taught courses, and 3) assessing student learning in interdisciplinary programs.</p> <p>In the EER we look forward to seeing the road map and an implementation plan that results from this process and the criteria by which UCLA will judge its success.</p>	<p>When Interdisciplinary Programs (IDPs) are reviewed by the Academic Senate, attention is paid to the issues listed by the Site Visit Team.</p> <p>In UCLA's new campus-wide academic plan, interdisciplinary teaching and research will be a specific focus of the faculty's consideration of "academic excellence." The plan provides a series of action plans to achieve this (see <i>Essay A</i>).</p>

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
26	<p>While UCLA provides educational technology support through a mix of distributed and centralized services, the mix is often unbalanced and support uneven across the academic units. ... There is duplication of services, unresolved user complexity, and operational inefficiencies.</p> <p>This type of decentralized support model also exacerbates financial issues. UCLA has established an Instructional Enhancement Initiative (IEI), that is both a program and a funding mechanism for providing educational technology support resources and infrastructure to the College of Letters and Science. Engineering has levied a similar assessment for undergraduate education. However, there is not a central funding mechanism to support the other academic units on campus, so the level and quality of services tend to be uneven.</p>	<p>In October 2008, (then Acting) Executive Vice Chancellor and Provost Scott Waugh created the Information Technology (IT) Planning Taskforce and charged it to develop a strategic plan for IT at UCLA. This report is the first comprehensive plan capturing all strategic initiatives in one place and it is the first time that an IT plan has also addressed the operating, funding, and governance models needed to support the strategic plan.</p> <p>UCLA's IT Strategic Plan, cited in the <i>Essay D</i>, addresses many of the issues raised in the Team Report.</p>
28	<p>The team would like a progress report on UCLA's effort to implement these technology-enhanced upgrades and refreshment schedules for general assignment classrooms as part of the EER report.</p>	<p>The Classroom Plan (authored by Office of Instructional Development; see <i>Essay D</i>) has regular upgrades integrated into the plan itself. Prioritization is included in the process; upgrades for systems external to the classroom are part of the IT Strategic Planning process.</p>
29	<p>The team is interested in how campus constituents might learn from UCLA's successful extension program and begin strategic discussions about credit-bearing distance learning opportunities given the interest of UCLA's administration in attracting more graduate students and in expanding UCLA's global reach.</p>	<p>Distance learning is a topic that the Faculty Committee on Educational Technology (FCET) and others will be considering as the economic crisis focuses on strategic use for education. Extension, as well as some of UCLA's Professional Schools (Engineering, Nursing, as well as Management) will be key consultants.</p>
29	<p>A statement about ways to support graduate students' use of educational technology, including the CCLE.</p>	<p>CCLE supports all levels of instruction, as does the Library and its facilities. Additional IT support is provided in specialized labs operated by departments and specific Organized Research Units.</p>
29	<p>The team is interested in how the educational technology professionals will assist instructors with instructional strategies to incorporate this technology into their teaching practice and research interests.</p>	<p>The Office of Instructional Development has created effective programs that help faculty incorporate ET into teaching practices (see http://www.oid.ucla.edu/training). Other faculty groups such as the Institute for Digital Research and Education (IDRE) support faculty and graduate students (see http://www.idre.ucla.edu/). IDRE has three core areas of research: High-Performance Computing (HPC), Humanities, Arts and Architecture, Social and Information Sciences (HASIS), and Statistical Computing (STATS).</p>

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
29	<p>...the team would like to see a sustainable model and organizational plan for depicting the roles, responsibilities, and relationships between centralized and distributed groups overseeing the operational and pedagogical support for the CCLE.</p> <p>A case study to assess student learning in the Freshman Cluster Program. The College librarians are piloting this project that weaves information literacy into the undergraduate curricula. The case study should track demonstrated progress towards extending the program to other general education and lower-division courses.</p> <p>A case study to assess student learning in an introductory statistics course in which students, faculty, and support staff are piloting the CCLE.</p> <p>A statement clarifying how UCLA plans to accomplish technology-enhanced upgrades and sustainable refresh for all learning spaces across campus. The discussion should include prioritization and assessment plans.</p>	Each of these issues is addressed in <i>Essay D</i> .
29-30	<p>Wireless connectivity is uneven across campus with distributed management of overlapping subnets and gaps in coverage. The team believes that the campus should consider the provision of seamless, contiguous coverage across academic buildings. The team also is interested in how the educational technology professionals will assist instructors with instructional strategies to incorporate this technology into their teaching practice and research interests.</p> <p>The team is interested in how the academic community, from undergraduates to researchers, is able to access digital resources through the libraries. Plans for expansion of access and the priorities for further acquisitions should be clarified.</p> <p>A statement clarifying how UCLA plans to improve its wireless network to provide seamless, contiguous coverage across academic buildings. The discussion should include ways that the educational technology professionals will prepare faculty with instructional strategies to incorporate this technology into teaching practice and research efforts.</p> <p>A statement clarifying how UCLA plans to acquire digital resources for the library. The plan should include how the academic community will coordinate efforts and prioritize choices.</p>	<p>These topics are not covered in the <i>Essay D</i> but could be addressed in a special session during the EER Site Visit.</p> <p><i>Wireless network:</i> UCLA has an extensive wireless network. It is not universally accepted that extending it is a well-defined need. Other technology may supersede some of the wireless functions.</p> <p><i>Library:</i> The UCLA Library—highly ranked as an institution and considered an exemplar for digital collections—is also part of the UC-wide California Digital Library and the nationwide Digital Library Federation. Coordination and prioritization are continuous functions within the Library's mission.</p>

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
30	A draft of the revised 2001IT Strategic Plan including examples of UCLA's Coordinated Autonomy support model.	UCLA's new IT Strategic Plan (currently being reviewed by various campus agencies) will be provided to the EER Site Visit Team; the plan is referenced in <i>Essay D</i> and available online.
30	UCLA acknowledges in the C&PR report that there is not a comprehensive plan in place for achieving clearly articulated learning outcomes across the board.	UCLA's comprehensive plan is outlined in <i>Essay B</i> .
32	The team recommends attention to the evaluation of interdisciplinary education and research for faculty advancement, course development and pedagogical support for faculty, and assessing student learning in interdisciplinary programs.	When Interdisciplinary Programs (IDPs) are reviewed by the Academic Senate, attention is paid to the issues listed by the Site Visit Team; see <i>Essay 2</i> of UCLA's Capacity Report.
32	After the full implementation of the CCLE, we recommend that UCLA review the organizational structure again to ensure adequate resources, central leadership, and coordinated support of teaching and learning. We recommend including an assessment plan in the EER.	Recommendation will be considered "after the full implementation of the CCLE" (see <i>Essay D</i>).
32	The EER should address how student learning will be assessed in undergraduate programs that do not incorporate some sort of capstone experience.	As noted in the <i>Essay B</i> , we have worked with faculty responsible for non-capstone majors to articulate learning outcomes, the assessment of which is facilitated by "curricular mapping," a technique used successfully by our Engineering faculty. Checking the alignment between a program's existing curricular offerings and expected learning outcomes is an important part of the process for clarifying <i>what</i> and <i>how</i> students are learning.
33	While our overall assessment is very positive...we are concerned that UCLA's infrastructure for assessing student learning is still emerging.	Two units in the Division of Undergraduate Education—the Center for Educational Assessment and the Evaluation of Instruction Program—are assisting faculty in the development of evaluation plans, including updating course evaluations and adding program-specific questions to the <i>UCLA Senior Survey</i> . In addition, a special assistant to the Vice Provost (Undergraduate Education), Dr. Jennifer Lindholm, has helped faculty articulate learning outcomes and assessment programs for capstone and non-capstone majors. In the future, OID's Instructional Development Grants will provide funding for units interested in hiring graduate students to help faculty pilot assessment programs. UCLA's two Councils will also be actively involved in setting helpful guidelines. For more details, see <i>Essay B</i> .

Pg #	Specific Recommendations in the Report of the Site Visit Team	UCLA's Response
34	We expect to see the approved revisions of the program review guidelines that incorporate assessment of program learning outcomes as part of the EER.	The Academic Senate Review process has been amended to include both the articulation and the assessment of learning outcomes for both capstone and non-capstone majors. For details, see <i>Essay B</i> .
34	We are concerned that UCLA is not yet prepared to fully meet the expectations of the WASC Commission with regard to formally approved and published learning outcomes for all academic programs (even those without existing plans for implementing capstones) and explicit assessment plans.	The Academic Senate Review process has been amended to include both the articulation and the assessment of learning outcomes for both capstone and non-capstone majors. For details, see <i>Essay B</i> .
34	As we noted above, we believe that the quality of the faculty engagement and substantial character of the institution's inquiry, taken in the context of UCLA's scale and the complexity of its mission, merits advice from the Commission in this regard to frame the EER.	The Commission's letter did not address this; see http://www.wasc.ucla.edu/2009_Commission_Letter.pdf

Appendix 3

Revisions to the Criteria for Review and the Institutional Review Process

Table A addresses changes in the Criteria for Review (CFR) and uses WASC's *Table A* to list each of the substantive revisions along with UCLA's responses.

Table B addresses new requirements for the Institutional Review Process and uses WASC's *Table B* to list the three new substantive areas to be covered in all comprehensive reviews along with UCLA's responses.

Appendix 3 - Table A
Supplemental Report on 2008 Changes to the Criteria for Review (CFR)

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions from WASC	We do this well <i>or</i> have action plan	Evidence or Comment
1.2	The institution develops indicators for the achievement of its purposes and educational objectives at the institutional, program, and course levels.	Does the institution have educational objectives at all three levels indicated in the CFR (institution, program, and course)? Have goals or expectations for achievement of these objectives been established? Where are these objectives and indicators published?	Have action plan	<i>Essay B</i> articulates a plan to establish learning outcomes for all undergraduate programs; these outcomes are already published for all graduate programs. UCLA will design institutional expectations for all undergraduates as part of its campus wide strategic planning (see <i>Essay A</i>).
1.2	The institution has a system of measuring student achievement, in terms of retention, completion, and student learning.	Does the institution have a systematic process for measuring student achievement? Does this system or process include analysis of data on retention and completion? Does it include processes for summative assessment of student learning?	Have action plan	UCLA's IR unit (AIM) provides key performance indicators for the Academic Senate reviews of undergraduate majors and the Graduate Division provides key performance indicators for graduate programs. Both include data on retention and graduation rates.
1.2	The institution makes public data on student achievement at the institutional and degree level, in a manner determined by the institution.	Does the institution publish data on retention and graduation rates? Student learning outcomes? Where?	We do some of this well; also have action plans.	UCLA posts an entire data portfolio that is updated annually: http://www.aim.ucla.edu/ Student learning outcomes will be published in the General Catalog and departmental websites.
1.9	The institution is committed to honest and open communication with the Accrediting Commission, to informing the Commission promptly of any matter that could materially affect the accreditation status of the institution	Does the institution keep WASC informed about important changes? Is there a process and assigned responsibility for ensuring that this reporting is done?	We do this well.	The Accreditation Liaison Officer and the Accreditation Coordinator are responsible for keeping WASC informed about important changes.

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions From WASC	We do this well <i>or</i> have action plan	Evidence or Comment
2.2b	GUIDELINE: Institutions offering graduate-level programs demonstrate sufficient resources and structures to sustain these programs and create a graduate-level academic culture.	If applicable: Are master's and doctoral programs adequately supported with the full array of resources expected for graduate-level study, including qualified faculty with appropriate workload levels, support for advising and theses/ dissertations, library and research? Is there a "culture" that is expected for graduate study, e.g., scholarly and intellectual engagement among faculty and students?	We do this well.	UCLA offers 103 Masters degree programs (M.A., M.S., Professional) and 88 Doctoral degree programs. The Graduation Division (http://www.gdnet.ucla.edu/faculty.html), as well as sponsoring departments & interdepartmental programs, support a strong graduate culture providing fellowships, TA training, special workshops on academic careers, diversity programs, as well as special publications and events designed specifically for UCLA graduate students and postdoctoral fellows.
2.3	The institution's student learning outcomes and expectations for student attainment are clearly stated at the course, program and, as appropriate, institutional level.	Have student learning outcomes (SLOs) been established for courses and programs? Have standards been established for the attainment of these SLOs? If appropriate to the institution, have institution-wide outcomes been established, e.g., for all undergraduate degrees? Where are outcomes and expectations for attainment found?	Have action plan.	UCLA's action plan for ensuring that all undergraduate programs have learning outcomes and appropriate assessment programs are discussed in <i>Essay B</i> of this report, as well as the capstone essay, <i>Essay C</i> . UCLA is in the process of establishing institution-wide outcomes for all undergraduates as a companion piece to the campus wide strategic plan.
2.7	All programs offered by the institution are subject to systematic program review. The program review process includes analyses of the achievement of the program's learning objectives and outcomes, program retention and completion, and, where appropriate, results of licensing examination and placement and evidence from external constituencies such as employers and professional organizations.	Is there a regular cycle of program review that includes assessment of student learning and analyses of retention and completion? Is program review conducted on schedule and as intended? Does it also include, where relevant to the discipline, results of licensing and placement? Where are completed program reviews maintained? (Also note new requirements on reporting on the effectiveness of program review in the this report. See Table B.)	We do this well.	In <i>Essay 2</i> of our WASC <i>Capacity and Preparatory</i> report, we described and assessed the Academic Senate's comprehensive and lauded Program Review. In their report, the WASC Site Visit Team noted, "UCLA has a well-established process of periodic program review that is characterized by a high degree of faculty ownership." In <i>Essay B</i> of this <i>Educational Effectiveness</i> report, we update the Academic Senate's process.

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions From WASC	We do this well <i>or</i> have action plan	Evidence or Comment
2.8	GUIDELINE: Where appropriate, the institution includes in its policies for faculty promotion and tenure recognition of scholarship related to teaching, learning, assessment, and co-curricular learning.	How do policies and practices on promotion and tenure address scholarship that relates to teaching and learning? Is this kind of scholarship valued and encouraged by the institution?	We do this well.	The Academic Personnel Manual and the CALL outline criteria for judging a faculty member's contribution to teaching, including the recognition of scholarship related to teaching, learning, and assessment.
2.10	The institution collects and analyzes student data disaggregated by demographic categories and areas of study. It tracks achievement, satisfaction, and campus climate to support student success.	Does the institution have a system for collecting and analyzing data about students? Are data on retention, graduation, time to completion, and other measures of student achievement, analyzed in disaggregated form by various categories so that the institution can understand how different groups of students are performing and are experiencing their education? Is the institution surveying students and analyzing the resulting data on satisfaction and climate? What are the results? How are they used?	We do this well.	The Office of Analysis and Information Management (AIM) is UCLA's largest institutional research (IR) unit. AIM fulfills a dual role—providing statistics, data, and information about UCLA to both the public and the campus. AIM prepares numerous reports and publications about UCLA. As part of the Office of Finance, Budget, and Capital Programs, AIM supports campus planning and evaluation by providing information to university decision makers about academic resources, activities, and outcomes. Services include regular reporting to Deans, Academic Senate Committees and external agencies that are used in the Program Review process and in strategic planning.
2.11	Consistent with its purposes, the institution develops and assesses its co-curricular programs.	Does the institution have student support services that are appropriate to its mission, its programs, and the needs of the students it serves? Are these programs regularly assessed to determine their effectiveness? By whom and how often? How are results of assessment used.	We do this well.	A large array of services is provided by Student Affairs (Vice Chancellor Janina Montero), the Division of Undergraduate Education (Vice Provost & Dean Judith Smith) and the Graduate Division (Vice Chancellor & Dean Claudia Mitchell-Kernan). The services provided are assessed every five years by the campus, when the administrator in charge undergoes a comprehensive performance review.

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions from WASC	We do this well <i>or</i> have action plan	Evidence or Comment
3.2	GUIDELINE: The institution systematically engages full-time non-tenure track, adjunct, and part-time faculty in such processes as assessment, program review, and faculty development.	Does the institution include adjunct, part-time, and non-tenure-track full-time faculty members in academic processes that affect student learning? What are the relevant institutional policies and practices that address their roles in the academic life of the institution? How are they involved in assessing student work? In carrying out program-level assessment? In conducting program review? Are they provided professional development to improve teaching and learning?	We do this well.	UCLA's lecturers and adjunct faculty are encouraged to participate in designing the curriculum in the department and to participate in the discussion of establishing learning outcomes, particularly for undergraduate courses and curricula in which they play a major role. During program reviews, the non-ladder faculty is invited to participate and may request individual or group meetings. The non-ladder faculty is also eligible to apply for instructional grants through the Office of Instructional Development. Their merit reviews take into account their service to the department and teaching programs.
3.3	Faculty and staff recruitment, orientation, workload, incentive, and evaluation practices are aligned with institutional purposes and educational objectives.	Are new faculty members provided with appropriate orientation?	We do this well.	UCLA sponsors a day-long orientation for new faculty, sponsored by the Academic Senate and the Vice Chancellor-Academic Personnel. Also, workshops on UCLA's merit review system are scheduled for new faculty.
3.4	GUIDELINE: The institution provides training and support for faculty members teaching by means of technology-mediated instruction.	If online or other modes of distance education are used to deliver programs and courses or to enhance or replace face-to-face instruction, are faculty members provided with training? Are they provided with technology support? How? When? How often? What does this consist of? Is it effective?	We do this well.	Annually, the Office of Instructional Development (see http://www.oid.ucla.edu/) provides several programs and workshops for faculty interested in learning more about educational technology. For specific details of key programs, see the Educational Technology essay (<i>Essay D</i>) in this EER Report.

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions from WASC	We do this well <i>or</i> have action plan	Evidence or comment
3.5	The institution has a history of financial stability, unqualified independent financial audits and has resources sufficient to ensure long-term viability.... If an institution has an accumulated deficit, it has realistic plans to eliminate the deficit.	Is the institution operating within its operating revenues and budgets? Is there an accumulated deficit or a pattern of operating deficits? If so, what are plans to address deficits? What are the trends? How soon will any accumulated deficits be eliminated? Are annual independent financial audits conducted? Have the audits and related management letters identified any practices or patterns that need to be addressed? If so, how and when are these areas being addressed? Is the institution financially sustainable now and for the future?	We do this well but the current fiscal crisis in the State of California has created areas of uncertainty and specific challenges.	UCLA's approaches to ensuring financial security in light of the fiscal crisis facing the University of California are discussed in <i>Essay A</i> of the UCLA Educational Effectiveness Report.
3.6	The institution holds, or provides access to, information resources sufficient in scope, quality, currency, and kind to support its academic offerings and the scholarship of its members. These information resources, services and facilities are consistent with the institution's educational objectives and are aligned with student learning outcomes.	Are information resources and related support and facilities aligned with the educational objectives? Aligned with student learning outcomes? Do they support and enhance student learning? How? Are they adequate to meet the needs of the faculty and students?	We do this well.	The Office of Analysis and Information Management (AIM) provides data and information about UCLA to both the public and the campus. AIM supports campus planning and evaluation by providing information to university decision makers about academic resources, activities, and outcomes. Services include regular reporting to Deans, Academic Senate Committees, and external agencies that are used in the Program Review Process and strategic planning. Other units also conduct IR research.
3.8	GUIDELINE: The institution establishes clear roles, responsibilities, and lines of authority, which are reflected in an organization chart.	Does the institution have clear job descriptions? Lines of reporting and responsibility? Is there an organizational chart that reflects the structure of the organization? Is this structure well understood within the institution?	We do this well.	All central administrative units post organizational charts with clear reporting lines; for example, see http://www.aim.ucla.edu/CampusProfile/Administration/chancellor.pdf

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions from WASC	We do this well <i>or</i> have action plan	Evidence or Comment
3.9	GUIDELINE: The governing body regularly engages in self-review and training to enhance its effectiveness.	Does the governing board engage in orientation, self-assessment, and development? Is this work designed to enhance the functioning of the board? When and how is it done? Is there any evidence of its value or impact?	Have action plan.	The Regents of the University of California (see http://www.universityofcalifornia.edu) interact regularly with the Office of the UC President and have clearly articulated policies (including internal review processes), and all agendas are published on the website (cited above). Recent reviews of UCOP indicate areas for improvement and action plans have been established.
3.10	The institution has a full-time chief executive officer and a chief financial officer whose primary or full-time responsibility is to the institution. In addition, the institution has a sufficient number of other qualified administrators to provide effective educational leadership and management	Does the institution have a full-time CEO/president/chancellor? Does the institution have a full-time CFO? How is the administration of the institution organized? Are there a sufficient number of qualified administrators to ensure that the institution is operated effectively? Is the leadership effective? Is the institution well managed? How do you know?	We do this well.	UCLA has a Chancellor and a full-time CFO as well as an Office of Academic Planning and Budget (APB). The organization (offices and reporting lines) for the Chancellor's office is posted at http://www.aim.ucla.edu/CampusProfile/Administration/chancellor.pdf
3.11	GUIDELINE: The institution clearly defines the governance roles, rights, and responsibilities of the faculty.	Does the institution have a charter or other document that sets forth the roles, rights and responsibilities of the faculty? Is the faculty role clear? Is the faculty vested with sufficient authority over academic programs and policies?	We do this well.	The Manual of the UC Academic Senate (see http://www.universityofcalifornia.edu/senate/manual/) clearly defines the governance roles, rights, and responsibilities of the UC faculty. In addition, each Division (campus) has its own Manual; for UCLA's Bylaws see http://www.senate.ucla.edu/FormsDocs/bylaws/toc.htm .

	Revised Criteria for Review (CFR) or Revised Guideline to CFR	Self-Assessment Questions from WASC	We do this well <i>or</i> have action plan	Evidence or comment
4.4	The institution employs a deliberate set of quality assurance processes at each level of institutional functioning, including new curriculum and program approval processes, periodic program review, ongoing evaluation, and data collection. These processes include assessing effectiveness, tracking results over time, using comparative data from external sources, and improving structures, processes, curricula, and pedagogy.	What are the institution's quality assurance processes? Do they exist at the institutional level and at other administrative levels? Does the institution have clear, published policies in the areas designated? Are they understood and followed? Do quality assurance processes assess not only capacity but effectiveness? If so, how? Are data, findings and results tracked over time to ascertain trends? Has the institution and units within it established benchmarks based on comparable institutions' performance? Are the results of the quality assurance processes used to make improvements? How does this work?	We do this well.	UCLA's Academic Senate has published guidelines for the approval of courses and programs at the undergraduate (see http://www.senate.ucla.edu/committee/UGC/Documents/ugccg.pdf) and graduate levels (see http://www.senate.ucla.edu/committee/gc/CDP/PROPREV.pdf). There is also a comprehensive manual, which sets guidelines and expectations for the Academic Program Reviews organized by the Undergraduate Council and Graduate Council; see http://www.senate.ucla.edu/ProgramReviews/PolicyAndProcedures.htm
4.5	The institution has institutional research capacity consistent with its purposes and objectives. Institutional research addresses strategic data needs, is disseminated in a timely manner, and is incorporated in institutional review and decision-making processes. Included in the institutional research function is the collection of appropriate data to support the assessment of student learning. Periodic reviews are conducted to ensure the effectiveness of the research function and the suitability and usefulness of data.	What is the capacity of the institution to conduct institutional research? How is IR conducted and by whom? Is there a description of this function that is published or widely understood at the institution? Is the IR function adequately resourced to meet the needs of the institution? What data are collected and analyzed? To whom are they disseminated and how often? Is there a "culture of evidence," i.e., is evidence used in making decisions and improvements? How is the IR function used to support the assessment of student learning assessment processes? Is the IR function evaluated periodically?	We do this well.	The Office of Analysis and Information Management (AIM) provides data and information about UCLA to both the public and the campus. AIM supports campus planning and evaluation by providing information to university decision makers about academic resources, activities, and outcomes. Services include regular reporting to Deans, Academic Senate Committees, and external agencies that are used in the Program Review Process and strategic planning. Other campus units also conduct IR research; see <i>Essay B</i> for details.

Appendix 3 - Table B
Addressing New Requirements in the Institutional Review Process (2008)

New Required Coverage	Questions for Discussion and Analysis	Evidence to be Analyzed or Drawn Upon	When
<i>1. STUDENT SUCCESS</i>			
<p>A study and analysis of student success, drawing from, but not limited to, [the institution's] data on retention and graduation rates, disaggregated by student type and by program. To the extent possible, the study should include comparisons with similar institutions and, where appropriate, recommendations for improvement.</p>	<p>How does the institution's mission affect its goals for student success? How are goals for student success established and reviewed? What do data on student attrition and retention show for various groups of students, including different demographic groups, degree levels, and majors? What do data show about graduation rates and time to completion? Are the data collected complete and accurate enough to make an informed analysis? Have goals for student success been established? Are benchmark data for comparable institutions available? How is the institution doing in meeting its own expectations and in comparison to other like institutions? Are retention and graduation rates "good enough"? If not, what next steps will be taken to develop plans to address student success?</p>	<p>UCLA currently has a benchmark for undergraduate student graduation rates; students entering as freshmen (FR) should have six-year graduation rates of 90% or higher; students entering as junior-level transfers (TR) should have four-year graduation rates of 90% or higher; this would place UCLA in the top flight of public research institutions and close to privates. Currently the graduation rate for both groups (FR and TR) is 89%; however, African American and Chicano/Latino FR have lower rates (73% and 81%, respectively), as do African American TR (83%). As part of the Vice Provost's (Undergraduate Education) Diversity Plan, her staff is now conducting a series of studies to determine reasons why African American and Chicano/Latino students have graduation rates lower than their peers. Based on the findings of these studies, the Vice Provost will develop programs to improve their likelihood of graduating at higher rates.</p>	<p>CPR</p>

New Required Coverage	Questions for Discussion and Analysis	Evidence to be Analyzed or Drawn Upon	When
1. STUDENT SUCCESS (continued)			
<p>Further development of student success efforts. Based on the findings of the institution and the team at the CPR review, the institution will be expected to further its analysis of student success, deepening its analysis of its own and comparative data on graduation and retention rates, year-to-year attrition, campus climate surveys, etc.</p>	<p>See above. What plans have been developed since the CPR analysis? Have these plans been implemented and assessed? What progress has been made in achieving a deeper understanding of student success? Promoting student success? Have there been any changes in performance data on retention and completion? What do these changes mean?</p>	<p>In our <i>Educational Effectiveness</i> report, each essay includes updates on our progress to articulate student learning outcomes and their assessment.</p> <p>Performance data in the past year have not changed and UCLA continues to have high graduation rates (see <i>Appendix 5</i> for Data Summaries).</p>	<p>EER</p>
2. PROGRAM REVIEWS			
<p>An analysis of the effectiveness of the Program Review Process. Institutions should analyze the effectiveness of the program review process, including its emphasis on the achievement of the program’s learning outcomes. It is expected that the process will be sufficiently implanted for the institution and the team to sample current program review reports (self-studies, external review reports) to assess the impact of the program review process and alignment with the institution’s quality improvement efforts and academic planning and budgeting.</p>	<p>Does the program review process meet the expectations reflected in the WASC Rubric for Assessing the Integration of Student Learning Assessment into Program Reviews? Are all academic and co-curricular programs subject to program review? Is program review conducted in a timely manner and in keeping with good practice? Is program review used to assess program effectiveness and student learning at the program level? Is it used to improve program effectiveness? Is it used to align resources with needs? How is program review articulated with the budgeting process? Is the program review process itself reviewed on a systematic basis? Are recent program reviews available to the WASC visit team?</p>	<p>UCLA has a top-rated Program Review Process that is run by the Academic Senate. The process is summarized and evaluated in Essay 2¹ of our <i>Capacity report</i>. In their report², the WASC Site Visit Team noted, “UCLA has a well-established process of periodic program review that is characterized by a high degree of faculty ownership.” The Team also noted: “Illustrative reviews were shared with the team, which indicated that the outcomes of the reviews are substantive (including sanctions) and engage faculty judgments on elements of curriculum design and revision as well as resources and productivity.”</p>	<p>CPR and EER</p>

New Required Coverage	Questions for Discussion and Analysis	Evidence to be Analyzed or Drawn Upon	When
3. SUSTAINABILITY OF EFFECTIVENESS PLANS			
A plan, methods, and schedule for assessment of learning outcomes beyond the Educational Effectiveness Review.	What is the plan for ongoing attention to educational effectiveness at the institution? Has a plan been developed that will cover the next seven to ten years? What next steps should be taken to ensure that systems and processes for evaluating effectiveness are sustained into the future and embedded into the culture and practices of the institution? Are the effectiveness plans integrated into the institution's strategic and operational plans and budgets? How will the systems for evaluating educational effectiveness be funded into the future? What areas have been identified as needing improvement or change? Have targets, goals or milestones been set? What is the timeline for activities and progress? When and how often will results be reviewed and by whom?	<p>UCLA's plans to provide ongoing attention to educational effectiveness are discussed in detail in the integration essay in <i>Essay B</i> of the <i>Educational Effectiveness</i> report.</p> <p>In <i>Essay B</i>, we also discuss changes in our Program Review process that will incorporate the articulation and assessment of student learning outcomes for all majors, as well as a timeline and process to institute and monitor these new procedures.</p> <p>In <i>Essay A</i>, we discuss how institutional resources are aligned with UCLA's current strategic plan.</p>	EER

¹ *Essay 2*. "Academic Senate Review and Educational Effectiveness" in UCLA's Report for the WASC Capacity and Preparatory Review; December 2007: http://www.wasc.ucla.edu/CPR_Essay2.pdf

² Report of the WASC Visiting Team Capacity and Preparatory Review to the University of California, Los Angeles; October 6-8, 2008), in partial fulfillment of the requirements for the reaffirmation of accreditation (received November 2008): http://www.wasc.ucla.edu/Visit_Team_Report.pdf

Appendix 4

Essay Workgroups and Events Timeline

Part 1 includes a membership list for each of the essay workgroups.

Part 2 contains an annotated timeline of the campus processes for the development of the UCLA report for the WASC *Educational Effectiveness Review*; the timeline demonstrates an extensive engagement of the UCLA community, including faculty, administrators, students, alumni, and staff.

Appendix 4 – Part 1

Membership List for Essay Workgroups

UCLA’s Reaccreditation Steering Committee

The Reaccreditation Steering Committee has been guiding the reaccreditation process at UCLA since its appointment in Fall 2006 by (then) Acting Chancellor Norman Abrams. The Committee oversaw the Capacity and Preparatory Review and now is overseeing the Educational Effectiveness Review. Subgroups of the Steering Committee were responsible for drafting Essay A. *Academic Planning in a Changed Fiscal Environment* and Essay B. *UCLA’s Approaches to Evaluating Educational Effectiveness*.

CHAIR: Judith L. Smith, Dean/Vice Provost and WASC Accreditation Liaison Officer

Academic Senate Leaders (and faculty representatives)

Chair Robin Garrell (Chemistry)
Immediate Past Chair Michael Goldstein (Community Health Sciences)
Past Chair Elizabeth Bjork (Psychology)
Past Chair Vivek Shetty (Dentistry)
Past Chair Adrienne Lavine (Mechanical and Aerospace Engineering)
Raymond Knapp (Musicology; Chair of the College Faculty Executive Committee)

Administrative Leaders

Rosina Becerra, Vice Provost, Faculty Diversity
Aimee Dorr, Dean, Graduate School of Education and Information Studies
Frank Gilliam, Dean, School of Public Affairs
Maryann Jacobi Gray, Assistant Provost
Janina Montero, Vice Chancellor, Student Affairs

Staff Representatives

Lucy Blackmar, Assistant Vice Provost, Undergraduate Education Initiatives
Gregory Kendrick, Director, Freshman Cluster Program
Jennifer Lindholm, Special Assistant to the Vice Provost
Larry Loehner, Associate Vice Provost and Director, Office of Instructional Development
Joanne Valli-Marill, Associate Director, Evaluation and Educational Assessment
Caroline West, Director, Office of Analysis and Information Management

WASC Coordinator

Mitsue Yokota, Campus WASC Coordinator

Capstone Workgroup

The Capstone Workgroup was appointed by UCLA's Reaccreditation Steering Committee in Winter 2007 to guide UCLA's Capstone Initiative. This workgroup was responsible for drafting Essay C. *UCLA's Capstone Initiative: Engaging Students in Creative Discovery* and worked collaboratively with the Academic Senate's Undergraduate Council to implement the initiative. This collaboration is documented in *Essay C*. Also in 2008-09, the Co-Chairs of Council's Curriculum Committee met regularly with the Workgroup.

CHAIR: Raymond Knapp (Chair, Musicology)

Robert Bjork (Chair, Psychology)

Peggy Fong (Ecology and Evolutionary Biology)

Robert Gurval (Classics)

Douglas Hollan (Chair, Anthropology)

Adrienne Lavine (Mechanical and Aerospace Engineering)

*Muriel McClendon (History; European Studies)

*Mark Moldwin (Earth and Space Sciences)

Joseph Rudnick (Dean, Physical Sciences)

Linda Sax (Education)

Stephen Smale (Microbiology)

Robert Watson (English)

Undergraduate Council, Co-Chairs of the Curriculum Committee (2008-09):

Kathleen Komar (Comparative Literature; Past Chair of Academic Senate)

Arlene Russell (Chemistry and Biochemistry)

Staff:

Lucy Blackmar (Assistant Vice Provost, Undergraduate Education Initiatives)

Jennifer Lindholm (Special Assistant to the Vice Provost)

*Also members of Undergraduate Council (2007-2009)

Faculty Committee on Education Technology

The Faculty Committee on Education Technology (FCET) is appointed annually by the Vice Provost for Undergraduate Education and the Associate Vice Chancellor for Information Technology and charged with: 1) create a continuing and evolving campus-wide vision and implementation plan for IT in undergraduate instruction; 2) making recommendations to the Information Technology Planning Board (ITPB) on key IT infrastructure initiatives that impact undergraduate instruction; 3) advising the Vice Provost for Undergraduate Education and the Deans on matters related to IT in undergraduate instruction; and 4) evaluating the effectiveness of instructional IT services and developing strategies to support continuous improvement in ET services to faculty and students. The FCET consists of faculty representatives from each of the four divisions of the College, as well as the professional schools that provide undergraduate instruction, one Assistant Dean, one computing Director, and the Associate Director, Instructional Technology at the Office of Instructional Development.

The FCET was responsible for drafting Essay D. *UCLA's Educational Technology Initiatives: Enhancing Learning and Teaching*.

CHAIR: Russell Poldrack (Psychology)

Troy Carter (Physics and Astronomy)

Reem Hanna-Harwell (Division of Humanities)

Kimberly Jansma (French and Francophone Studies)

Lianna Johnson (Life Sciences Core Curriculum)

Michelle Lew (Office of Instructional Development)

Robin Liggett (Architecture and Urban Design/Planning)

Larry Loehner (Office of Instructional Development)

John Mamer (Anderson School of Management)

Debra Pires (Life Sciences Core Curriculum)

Janice Reiff (History)

Vincent Riggs (School of Public Affairs)

James Schultz (Germanic Languages)

David Smallberg (Computer Sciences)

Francis F. Steen (Speech & Communication Studies)

John Tormey (Physiology)

Ray Walker (Institute of Physics and Planetary Physics)

Staff: Joanne Valli-Marill (Office of Instructional Development)

Appendix 4 – Part 2
Timeline in the Development of the
Educational Effectiveness Review Report

October 2008

- 14 *Essays B and C* – Capstone Workgroup meeting to discuss initial slate of 27 applicants for Capstone Major.
- 17 *Essays B and C* – Undergraduate Council meeting where Capstone Workgroup Chair presents the slate of applicants, letter summarizing the workgroup’s actions, and complete sets of application materials to all members.
- 29 *EER Report* – Meeting of the WASC Steering Committee to discuss the framework for the Educational Effectiveness Review Report and to discuss the timeline and site visit schedule.
- 31 *Essays B and C*—Meeting with English to discuss Capstone Major application.
- 31 *Essays B and C* – Undergraduate Council meeting to discuss the Capstone Major Certification Applications.

November 2008

- 3 *Essay B* – Meeting with faculty representatives attending the WASC Learning Outcomes Retreat at UC Irvine.
- 6 *Essay D* – Faculty Committee on Educational Technology (FCET) meeting to provide an update on WASC process.
- 7 *Essay B* – WASC Learning Outcomes Retreat at UC Irvine attended by faculty from Biology, Chemistry, English, Psychology, and Theater.
- 20 *Essays B and C* – Meetings with Global Studies; Southeast Asian Studies; International Development Studies; Music; Film & Television; and Art to discuss Capstone Major applications.

December 2008

- 3 *Essay B* – Meeting with faculty representatives that attended the WASC Learning Outcomes Retreat – discuss next steps for these programs.
- 5 *Essay C* – Undergraduate Council meeting to continue discussions of the Capstone Major Applications.
- 11 *EER Report* – WASC Steering Committee meeting to discuss campus response to the Site Visit Team Report.

January 2009

- 9 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 9 *Essay C* – Undergraduate Council meeting to discuss the role of the Undergraduate Council in preparing for the Educational Effectiveness Review Report and site visit.
- 12 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 13 *Essay C* – Capstone Workgroup meeting to discuss next steps in the Capstone Initiative; Review new proposals for capstone major.
- 15 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 20 *Essay B* – Meeting with Chemistry/Biochemistry to discuss learning outcomes development and assessment planning.

- 23 *Essay C* – Undergraduate Council meeting to discuss Department Course Inventory developed by the Capstone Workgroup.
- 26 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 29 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 30 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.

February 2009

- 9 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 12 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 13 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 20 *Essay C* – Undergraduate Council – certifies slate of 18 degree granting programs for Capstone designation.
- 24 *Essays B and C* – Meeting with Theater to discuss Capstone Major application.
- 26 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.

March 2009

- 5 *EER Report* – WASC Steering Committee Meeting to discuss the phone call with the WASC Commission and plans for the Educational Effectiveness Review Report.
- 6 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 9 *Essays B and C* – Meeting with History to discuss Capstone Major application.
- 9 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 11 *Essays B and C* – Meeting with Economics/International Area Studies to discuss Capstone Major application.
- 19 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 20 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 24 *Essay D* – Meeting with Professor Esfandiari to discuss the assessment for statistics courses using Moodle Quiz Tool.
- 30 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 31 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.

April 2009

- 3 *Essay C* – Undergraduate Council – certifies 5 degree granting programs for Capstone designation.

- 14 *EER Report* –WASC Steering Committee meeting to discuss potential additional site visit team members and review the first draft of the Educational Technology essay.
- 15 *Essay C* – Capstone Workgroup Meeting to discuss 4 new applications for Capstone major.
- 16 *Essay A* – Academic Programs Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 17 *Essay A* – Revenue Taskforce meeting to discuss recommendations for the Budget Toolbox Project.
- 20 *Essay A* – Cost Savings and Efficiency Taskforce meeting to discuss recommendations for the Budget Toolbox Project.

May 2009

- 7 *EER Report* – WASC Steering Committee meeting to review the first draft of Essay A; discuss issues related to program reviews and the revised UCLA Academic Senate Guidelines; and the WASC Academic Resource Conference.
- 8 *Essay D* – Faculty Committee on Educational Technology (FCET) meeting to review the revised draft of the Educational Technology essay.
- 12 *Essay B* – Meeting with Chemistry/Biochemistry to discuss learning outcomes/assessment work.
- 21 *Essay C* – Capstone Workgroup meeting to discuss Capstone Initiative essay for the Educational Effectiveness Review Report.

June 2009

- 1 *EER Report* – WASC Steering Committee Meeting to discuss draft of the Capstone Initiative essay.
- 5 *Essay C* – Undergraduate Council – certifies 4 degree granting programs as Capstone majors.
- 5 *Essay D* – Faculty Committee on Educational Technology (FCET) Meeting to review the draft of the Educational Technology essay.
- 22 *Essays B and C* – Meeting with College Honors Individual Major to discuss Capstone Major application.

July 2009

- 6 *Essays B and C* – Meeting with Atmospheric and Oceanic Sciences to discuss Capstone Program application.
- 8 *Essays B and C* – Meeting with Computational and Systems Biology to discuss Capstone Major application.
- 9 *Essays B and C* – Meeting with Women’s Studies to discuss Capstone Major application.
- 20 *Essays B and C* – Meeting with Study of Religion to discuss Capstone Major application.
- 30 *EER Report* – WASC Steering Committee Meeting to review revised drafts of all sections of the Educational Effectiveness Review Report.

August 2009

- 3 *Essays B and C* – Meeting with Physiological Science to discuss Capstone Major/Program application materials.

- 27 *EER Report* – WASC Steering Committee Meeting to review revised drafts of all sections of the Educational Effectiveness Review Report – finalize the Steering Committee draft of the report.

September 2009

- 9 *Essays B and C* – Meeting with Chicana/o Studies to discuss Capstone Major application.
- 9 *EER Report* – Steering Committee Draft of the Educational Effectiveness Review Report distributed to the Chancellor, Executive Vice Chancellor, and members of the Steering Committee.
- 21 *EER Report* – ALO meets with Chancellor and Executive Vice Chancellor to discuss the Steering Committee Draft of the Educational Effectiveness Review Report.
- 22 *Essays B and C* – Meetings with German and with Art History to discuss Capstone Major/Program applications.
- 23 *Essays B and C* – Meetings with Molecular, Cell, and Developmental Biology; Earth and Space Sciences; Comparative Literature; Asian Languages and Cultures; and East Asian Studies to discuss Capstone Major/Program applications.
- 24 *EER Report* – WASC Steering Committee Meeting with Executive Vice Chancellor/Provost Scott Waugh to obtain feedback on the Steering Committee draft of the report; finalize the Campus Draft of the Report.
- 29 *Essay B* – Meeting with Business Economics to discuss learning outcomes.
- 30 *Essays B and C* – Meeting with Nursing to discuss Capstone Major application.

October 2009

Review period for Campus Draft of the Educational Effectiveness Review Report begins (October 2 – November 10, 2009).

- 2 ALO previews the Campus Draft of the Educational Effectiveness Review Report to the Chancellor's Leadership Retreat – participants include members from the Chancellor's Executive Committee, Executive Vice Chancellor and Provost's Deans' Council, Academic Senate Leadership, and Chancellor's Competitiveness Council.
- 5 *EER Report* – Campus Draft of the Educational Effectiveness Review Report distributed to the Chancellor, Executive Vice Chancellor, Academic Senate and members of the Steering Committee.
- 8 *EER Report* – Academic Senate Executive Board reviews Campus Draft of the Educational Effectiveness Review Report; draft to be vetted by various Senate committees.
- 16 *EER Report* – Graduate Council meeting to review the Educational Effectiveness Review Report.
- 21 *EER Report* – ALO discusses the Campus Draft of the Educational Effectiveness Review Report with the members of the Executive Vice Chancellor's Deans' Council.
- 23 *EER Report* – Undergraduate Council meeting to discuss the Educational Effectiveness Review Report.
- 24 *EER Report* – Chair of the Academic Senate discussed the Educational Effectiveness Report with the UCLA Alumni Association Executive Board.
- 26 *EER Report* – ALO reviews the Campus Draft of the Educational Effectiveness Review Report with the President of the Undergraduate Students Association.
- 26 *EER Report* – Council on Planning and Budget meeting to review the Educational Effectiveness Review Report.

- 28 *EER Report* – ALO meets with the Graduate Student Council’s Cabinet to discuss the Campus Draft of the Educational Effectiveness Review Report.
- 30 *Essays B & C* – College Faculty Executive Committee meeting to discuss essays for the Educational Effectiveness Review Report.
- 30 *EER Report* – Graduate Council meeting to discuss the Educational Effectiveness Review Report.

November 2009

- 2 *Essays B and C* – Meeting with International Development Studies to discuss Capstone Major application.
- 3 *EER Report* – ALO meets with the Undergraduate Student Council to discuss the Campus Draft of the Educational Effectiveness Review Report.
- 6 *EER Report* – Undergraduate Council meeting, a continued discussion of the Educational Effectiveness Review Report.
- 12 *Essays B and C* – Meeting with Physics and Astronomy to discuss Capstone Program possibilities.
- 16 *Essays B and C* – Meeting with Chemistry/Materials Science to discuss Capstone Major application.
- 17 *EER Report* – Steering Committee meeting to discuss recommendations from various campus constituents regarding the Campus Draft. Begin preparation of the final draft.
- 18 *Essays B and C* – Meeting with International Development Studies to discuss Capstone Major application.
- 19 *Essays B and C* – Capstone Workgroup meeting to discuss new slate of applicants for Capstone Major and Capstone Program.
- 19 *EER Report* – Academic Senate Executive Board reviews changes to the Educational Effectiveness Review Report by the Steering Committee.
- 20 *Essays B and C* – Undergraduate Council – certifies 1 degree granting program for Capstone designation.
- 20 *Essays B and C* – Meeting with Design | Media Arts to discuss Capstone Major application.
- 30 *Essays B and C* – Meeting with Political Science to discuss Capstone Major application.

December 2009

- 3 *Essays B and C* – Meeting with English to discuss curriculum changes and possible Capstone program.
- 7 *EER Report* – Report submitted to WASC and site visit team members.

Appendix 5

Electronic Data Portfolio

Appendix 5 has three sections; all portfolio items are hyperlinked.

Part 1: [Summary Data Form](#)

Part 2: Exhibit 7.1–*Inventory of Educational Effectiveness Indicators*

- A. Inventories for Undergraduate [Capstone Majors](#)
- B. [Timetable](#) for Completing the Inventories for UCLA Undergraduate Majors
- C. Educational Effectiveness Inventory for [Graduate Degree Programs](#)

Part 3: [Exhibit 8.1](#)–*Inventory of Concurrent Accreditation and Key Performance Indicators*