

Models of Academic Support
Library/Faculty Fellows for Undergraduate Research
University of California, Berkeley

2006 Interim Report

31 January 2007

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The Mellon Library/Faculty Fellowship for Undergraduate Research at the University of California, Berkeley encourages faculty collaboration with the Library and other campus partners to strengthen relationships between undergraduate research, information literacy, and library collections, and aims to create a scalable and sustainable model for curriculum change.

Project objectives include:

- strengthening a community of faculty dedicated to providing undergraduate research opportunities which require the use of library collections and services;
- supporting faculty to serve as change agents on the campus and beyond;
- strengthening collaboration among the campus academic partners (The Library, Office of Educational Development, Division of Undergraduate Education, Graduate Student Instructors Teaching and Resource Center, American Cultures, and Educational Technology Services) in support of instructors;
- influencing instruction and the development of large enrollment/high impact campus courses and curricula.

2006 HIGHLIGHTS

The project's campus reach lengthened in 2006 by the addition of thirteen new Faculty Fellows, five of whom were from departments not previously represented. Four new Librarian Fellows also joined the project. In deepening their skills through participation in the fellowship, they will carry the lessons they've learned forward to other courses and thus sustain the goals of the project. Innovation funding was granted to five teams of Mellon collaborators whose proposals were adaptable to other courses and departments or led to sustainable curricular changes. By continuing efforts to increase the number of American Cultures courses that include a Mellon research component, we continued to build a sustainable set of courses that are regularly offered at Berkeley and that fulfill this singular University-wide curriculum requirement. Members of the Steering Committee made presentations at statewide and national conferences and published invited chapters that highlighted the Berkeley Mellon Fellowship Project, sparking interest in the development of similar models of academic support at other American research universities.

Strengthening a community of faculty dedicated to providing undergraduate research opportunities

To this end, in 2006 ...

- We welcomed thirteen 2006-2007 Mellon Faculty Fellows to the Mellon Project and the Institute, broadening the project's reach to include the first faculty representatives from the departments of African-American Studies, Geography, Law and Legal Studies, German, and Statistics. We continued to build "mini-cohorts" of Faculty Fellows within the Political Science, Environmental Studies, and Ethnic Studies Departments and the School of Public Health. Among the most valuable aspects of the Institute and Fellowship, in the words of faculty were: "Meeting with faculty across disciplines ... going over actual assignments,

syllabi, etc. Getting concrete feedback on our research assignments;" "Thinking about students, as learners and researchers, their needs, skills/lack thereof. Taking both a semester long and curriculum long approach to thinking about what exactly we're training them to do. Learning about the vast number of resources Institute-wide available to help improve my teaching;" and "Feedback from my [implementation] team and colleagues about specific issues [of] teaching and designing the assignment."

- As in the preceding two years, three Faculty Fellows were selected for a year-long focus on assessment of student learning. With the support of the Assessment Consultant employed in the Library, these Fellows committed to integrating assessment strategies into their assignments and providing data on student learning outcomes related to library research. An ongoing goal of this assessment work is to identify commonalities among classes and develop assessment tools that can, in the future, be applied to multiple classes across departments.
- Due to scheduling conflicts, the Spring and Fall 2006 Mellon Faculty Salons were not held. Instead, Fellows were invited to attend the Library's Undergraduate Research Prize Awards Reception in May 2006. The Prize recognizes excellence in undergraduate research projects that show significant inquiry using the library and its resources particularly emphasizing the undergraduates' execution of the research process itself. A number of prize winning undergraduates have been mentored by Mellon Fellows.

Supporting faculty to serve as change agents

To this end, in 2006 ...

- In 2005, the departmental funds allocated from the grant were renamed "Innovation Funds" to support best practices or key innovations that are scalable or portable, adaptable to other courses or departments, have a wider campus impact, or lead to sustainable curricular changes. Reformulating the criteria whereby these funds are allocated resulted in Faculty Fellows collaborating with peers from other disciplines and departments, and with staff in academic support units, more extensively than they had in previous years. Five proposals were funded for 2006: (1) a portable audio recording studio available to undergraduates whose may store and publish files (such as field interviews) via webcast, podcast, instructor web sites, or other learning spaces; (2) a half-day colloquium on integrating research into writing-intensive courses; (3) the digitization of visual architectural artifacts to develop an online resource with which undergraduates can conduct original research across a range of courses; (4) a collaboratively-developed workshop to assist campus faculty in identifying needed interventions with students and Graduate Student Instructors to insure the success of undergraduate research projects; and (5) the purchase of a networked video server for multiple uses across the Art Practice and New Media curriculum, allowing faculty and students to collaboratively develop and evaluate content for research projects. Recipients were required to submit a one-page executive summary once their project has been completed. Examples of the reports are appended to this report (Appendix A, B, C). Impacts of these investments included a strengthening of collaborations among the Fellows and

Academic Partners, the dissemination of the Mellon message and methods across a range of faculty, lecturers, and graduate student instructors situated across the campus; and the development of research collections appropriate to the 21st century undergraduate scholar/researcher.

- 2007 Innovation Funding proposals were approved: (1) a series of workshops to help science and engineering faculty plan directed student research projects; (2) modification of a capstone exercise that require students to research different topics in lab sections using the library's resources; (3) a wiki-based research site to which students and faculty from several courses and departments can collectively contribute and evaluate data primary sources, and other documents; and (4) a colloquium within the College Writing Program on teaching research writing as a process, demonstrating how the process can be divided into manageable and teachable units within a course and sharing models that help sustain these improvements across that curriculum.
- Project Director Elizabeth Dupuis and members of the Mellon Steering Committee, Victoria Robinson (American Cultures Center) and Cynthia Schragger (Division of Undergraduate Education), delivered a keynote presentation entitled "A Case Study: Creating a Culture of Collaboration at the University of California, Berkeley" at the Third National Reinvention Center Conference, held in Washington, D.C. in November 2006. The presentation once again brought Berkeley's Mellon Project to the attention of a national audience.
- In October 2006, Project Director Elizabeth Dupuis and Project Manager Patricia Maughan were invited by Cornell University Libraries to speak to an assembly of librarians, faculty, and campus administrators on the goals, implementation, and outcomes-to-date of Berkeley's Mellon Project. The presentation, entitled "From Dialogue to Impact: Enhancing Campus Collaboration in the Service of Student Learning & Engagement" was accompanied by a day of consulting with a wide range of Cornell University librarians and educational specialists. Cornell Libraries have since proposed that Berkeley's Mellon Steering Committee work with them to design a program whereby Cornell staff receive professional development training with the goal of implementing a similar project on their campus. Discussions are ongoing.
- Project Manager Patricia Maughan delivered a presentation entitled "A Case Study in Evaluation & Assessment for a Virtual Learning Commons" at the California Academic & Research Libraries Pre-conference, Creative Strategies for Learning and Leading - Learning Commons Planning, Implementation, and Outcomes, held at Asilomar, California in April 2006. Evaluation and assessment strategies employed and tested during Berkeley's Mellon Project were shared with attendees as part of the presentation.
- Project Director Elizabeth Dupuis was invited to speak to the ACRL Higher Learning Commission at their Annual Meeting and Conference held in Chicago in March-April 2006. Her presentation, titled "Enriching the Academic Research Experience Through Research-Based Learning" has sparked interest in developing models of academic support at other American universities.

- Two chapters relating to Berkeley's Mellon Project were published in the literature in 2006. Project Director Elizabeth Dupuis, Co-Principal Investigator and Vice Provost for Undergraduate Education Christina Maslach, and Academic Partners Cynthia Schrager (Division of Undergraduate Education) and Sarah McDaniel (University Library) co-authored a chapter entitled "Information Literacy and Undergraduate Research at the University of California," that appeared in Information Literacy Collaborations That Work, published by Neal Schuman. A chapter entitled "The Winds of Change: Generation Y, Student Learning, and Assessment in Higher Education" authored by Project Manager Patricia Maughan was included in the work Student Engagement and Information Literacy, published by the American Libraries Association.

Strengthening collaboration among campus partners

To this end, in 2006 ...

- We continued to develop a faculty-centered support structure of expertise in the form of Implementation Teams (I-Teams) assigned to work with each Faculty Fellow in the redesign of his/her course and research assignment(s). The I-Teams continued to be composed of representatives from Berkeley's Academic Partners (the Library, GSI Teaching and Resource Center, and Educational Technology Services) and were responsible for assisting the Faculty Fellows in implementing the changes they developed during the Institute into their courses and assignments. Staff from the Center for the Study and Teaching of American Cultures and Office of Educational Development were also available to provide assistance as needed. The Project Partners deepened their collaboration as they continued to work together over an increasingly sustained period of time, thus moving the campus toward a greater commitment to the project's overarching goals.
- Following a competitive selection process, four new Librarian Fellows received stipends equal to those granted to the Faculty Fellows. During the Fellowship, the Librarian Fellows were assigned to partner with the Faculty Fellows and other campus academic staff to design instructional materials and techniques serving as models of good practices for other Library staff and extending the impact of the Mellon Project on campus teaching and learning. This component of the project has been a successful approach to developing deeper skills for librarians involved and therefore increasing the potential for sustainability.
- In 2005, the Steering Committee approved a proposal received from Deb Gilchrist, a nationally recognized expert in information literacy and assessment. Ms. Gilchrist is a doctoral student in the Higher Education Administration and Leadership program at Oregon State University and Dean of Libraries and Media Services at Pierce College. Her dissertation topic relates to libraries as a change agents for instruction on college campuses. In 2006, Ms. Gilchrist interviewed members of the Mellon I-Teams, Fellows, and Steering Committee members to examine their experiences with the project. Through grounded theory methods, she hopes to draw themes from the interviews that will suggest a model allowing UC Berkeley's Mellon work to be carried forth by other libraries. We are hopeful that her campus interviews will reveal more about the supports and obstacles to changing a campus culture and that her observations will be illuminating not only

for Berkeley but to the broader national and international Higher Education community.

Influencing instruction and course development

To this end, in 2006 ...

- The Vice Provost for Undergraduate Education and Project Director continued to meet with Department Chairs – 2006 meetings focused on Ethnic Studies, Economics, English, Legal Studies, Public Health, and Sociology --, encouraging them to identify faculty who would be encouraged to apply, based on the courses they teach, their research interests, and the positive impact the Fellowship could have on their teaching careers. This year Mellon Steering Committee member Victoria Robinson, Director of the American Cultures Center, participated in these meetings as well to reach out to faculty teaching American Cultures (AC) courses or courses that are strong candidates for the AC designation. By emphasizing AC courses, the only campus wide requirement for graduation, we intend to build a sustainable set of courses that are regularly offered by departments to fulfill this curriculum requirement. As in the past, reactions from the Department Chairs have been strongly favorable.
- In 2006, eleven out of the thirteen 2006-2007 Mellon Faculty Fellows were assigned to teach large enrollment courses, ranging in size from 100 to 500 students.
- In June 2006, we built an active Mellon Institute course site using bSpace, UC Berkeley's local implementation of the Sakai collaboration and learning environment, to provide the 2006-2007 Faculty Fellows with an opportunity to experience an online course system from a student's perspective and to learn the features of this new campus environment meant to replace all previously existent courseware on the campus. With this knowledge, Faculty Fellows were able to determine the extent to which an interactive course site might enhance their students' learning experiences.

Program management & outcomes

- Having explored the possibilities for filling the Evaluation Consultant role for the grant, the Project Director hired Dr. Mary Sue Ammon in March 2006. Dr. Ammon was to collect and analyze qualitative and quantitative data from 2006-2007 and analyze data collected during the earlier years of the project. Prior to the employment of Dr. Ammon, a subcommittee comprising Project Director Elizabeth Dupuis, Project Manager Patricia Maughan, and the Assessment Librarian Sarah McDaniel met to revise the previously developed Mellon Evaluation Framework that had been drafted in 2005 using questions submitted by each of the Steering Committee members. With only 1.5 years left to the grant, the subcommittee felt the original scope of the evaluation framework was too broad to address, given the amount of available resources. It re-framed the objectives of the evaluation framework, with the goal of better integrating the Mellon Project into the goals and structure of the campus. Questions relating to

Project now revolve around three key question areas: (1) the impact of the project on individual UC Berkeley faculty; (2) the impact of the project on the campus culture of learning; and (3) the impact of the project on student learning. Dr. Ammon worked with the subcommittee throughout 2006 to redesign the Evaluation Framework and determine the questions to be addressed and answered, clarified processes for collecting and handling various types of data, and designed data collection tools. She has also been reviewing and analyzing data collected in the preceding years of the project and conducting faculty and project personnel interviews. The results of Dr. Ammon's work will inform the final report on the project submitted to Mellon as well as reports to campus administrators and governing bodies, and future reports to appear in the literature.

- Growing out of interest expressed during Mellon meetings between Project Director Elizabeth Dupuis, Vice Provost for Undergraduate Education Christina Maslach and Department Chairs, Elizabeth Dupuis was invited to draft a proposal for a Mellon-like undergraduate research initiative that could be undertaken by the campus. One outgrowth of this request was the creation of an Undergraduate Research Experience Working Group, chaired by a member of the Mellon Steering Committee Cynthia Schrager, and involving staff from the Library, other Academic Partners, and campus administrators responsible for providing various campus undergraduate research learning experiences. The Working Group proposed the development of a Berkeley "Introduction to the Research University" experience that will provide freshmen and transfer students with an initial experience in developing undergraduate research competencies, facilitate students transition to university-level work, and motivate them to engage in available undergraduate research opportunities. With the implementation of the "Introduction to the Research University," Berkeley will be impacting the research skills of undergraduates and at the same time influencing the campus' learning culture and a manner consistent with the aims of the Mellon Fellowship Project. A pilot of this initiative is currently in development.
- The Mellon web site underwent a major restructuring in 2006 and is continuing to be developed. The focus of the new site, <http://www.lib.berkeley.edu/mellon>, is to inform communities beyond the Berkeley campus of the goals, implementations, and results of the Mellon Library/Faculty Fellowship on Undergraduate Research. Information is currently available on such topics as the background for the project, project reports, participating faculty, events, collaborations, courses, assignments and syllabi, details of the Institute, and information shared in published works and presentations by project participants. Portions of the site, e.g., Project Evaluation and Good Practices will be developed in 2007. The primary goal of the redesign is to provide thorough and useful documentation to not only the Berkeley campus but to other institutions who are interested in pursuing similar strategies for integrating undergraduate research into campus and departmental curricular as a means for improving student learning.
- A range of post-Mellon Grant activities have been identified by the Academic Partners and Steering Committee. These include such initiatives as working with the Council of Deans and campus Academic Program Reviews so that the goals of the Mellon Project can be integrated into campus planning, highlighting Mellon re-designed courses in the campus Course Schedule, and re-packaging Mellon

developed materials to be used by others on the campus who share a commitment to the goals of the Project. In these ways, we hope to strengthen the impact of the Mellon Project on the campus culture of learning in practical and executable ways.

- The Project encumbered an additional \$31,740.10 which is not reflected in the University of California Accounting Services - EFA Report for the period 01/01/2006 to 12/31/2006. The adjusted figures, including these encumbrances are as follows:

CUMULATIVE FINANCIAL REPORT - 2006 INTERIM REPORT

Period From 01/01/2006
To 12/31/2006

UNEXPENDED BALANCE AT 12/31/2006	\$274,061.93
Less 2006 encumbrances	- 31,740.10
NET UNEXPENDED BALANCE at 12/31/2006	\$242,321.83



APPENDIX A

Executive Summary College Writing Mellon Innovation Project

Kaya Oakes and Pat Steenland were awarded a Mellon Innovation Grant for a total of \$2000 in the Spring semester of 2006. The funds were allotted to support our research colloquium, *Reading, Writing, and Doing Research*, which took place on April 14, 2006.

After working on planning the colloquium with Linda Von Hoene of the GSI (Graduate Student Instructor) Teaching and Resource Center, and after meeting with Reading and Composition (R & C) Coordinators from ten campus departments and programs, as well as meeting with Sarah McDaniel of the Teaching Library, we arrived at a final budget and planned the logistics of the event. Jane Stanley, the assistant director of the College Writing Program, assisted in our planning the event, securing a venue, and ordering the catered food and beverages. College Writing work study assistant Allen Lew helped with the multi-media presentation during the event.

The colloquium took place on April 14. The total attendance over the course of the event was approximately 70-80 GSI's and lecturers. Pat and Kaya both presented methods for doing research, with Kaya drawing upon her experiences as a Mellon fellow, and Pat presenting based on her collaborative work with Theresa Salazar of the Bancroft Library. Sarah MacDaniel also gave a presentation on working with the library in 1B sequence R&C courses. Attendants were enthusiastic and happy to ask questions, and both Pat and Kaya received multiple follow-up questions and requests for materials after the event.

This event has had multiple impacts. It has increased awareness of CWP's mission to teach writing and research in a scaffolded, multi-step method; it has enhanced our relationship with the library and librarians who help with our courses; and, most significantly, it has allowed GSIs to receive some additional ideas and information about teaching research in a thorough and manageable manner. The event has also lead to planning to make the colloquium an annual event, which is unique on campus and will hopefully help to disseminate the Mellon mission for many years to come.

Submitted November 2006 by:
Kaya Oakes and Pat Steenland, College Writing Programs



APPENDIX B

Executive Summary College of Chemistry Mellon Innovation Project

We used Mellon Innovation Funds to plan and execute a workshop for faculty that use GSIs directing student research projects. The budget was spent mostly on support staff, catering, room rental and printing. Without the help of the Mellon funds, I would not have had the resources to undertake this workshop.

Transforming Learning in Undergraduate Courses: Working Effectively with GSIs to Guide Student Research

Margaret Conkey, Professor, Department of Anthropology
Michelle Douskey, Lecturer, Department of Chemistry
Rosemary Joyce, Professor and Chair, Department of Anthropology
Sarah McDaniel, Interim Head, Doe/Moffitt Instructional Services
Ruth Tringham, Professor, Department of Anthropology
Linda von Hoene, Director, GSI Teaching and Resource Center

Description of workshop

The main focus of the workshop was to help faculty to identify the interventions needed with students and GSIs in order for the research project to be successful. We presented some example research projects from chemistry and anthropology, each with their own model. The anthropology course involved a complete rethinking of how course content is delivered, putting the students in charge of researching specific archaeological sites. In chemistry, the research project is a small yet powerful addition to the established lab curriculum.

The workshop was broken into three segments: identification of skills needed by students, identification of skills needed by the GSIs and the plan for training both parties. At each step, the participants were asked to reflect and free write about their own project. They also shared thoughts and ideas with others at the table. A binder of useful materials was provided which included more detailed information about the example courses and resources available on campus for faculty.

Evaluation of workshop

We conducted an evaluation of the workshop to ascertain what aspects of the workshop were helpful and to identify the need for future events. The development and use of grading rubrics to assess student research was mentioned most often as a valuable to the participants. In general, the participants appreciated the design framework that we presented and felt that it could be used and adapted regardless of discipline.



APPENDIX C

Executive Summary College of Environmental Design Mellon Innovation Project

Working with Maryly Snow, the director of the Audiovisual Resources Library (AVRL) in the College of Environmental Design, I applied for Innovation Funds from the Mellon Faculty Institute on Undergraduate Research to digitize slides that are instrumental to the teaching of my courses in the history of American architecture at Berkeley. The specific aim of the project was to begin to reconceptualize the nature of the digital database, in this case SPIRO, as more than a bank for storing images for lectures. Instead, digital databases can become research tools for students, where they can access a range of original images that exist only in this form, thus allowing them to conduct original research. One of the limitations in architectural history is that those buildings that students might want to study are rarely local and visiting archives is often difficult or impossible. With a large, well-organized database, furnished with my own original photographs of buildings, students would be able to conduct a range of research projects, or at very least, supplement research in books with material from the database.

We thus set a goal to digitize some 1000 images of American architecture from my personal collection. They were picked, in part, to go with the development of a new course called "American Architecture as American Culture," which aims to revisit the typological method of inquiry into architectural history. In place of the traditional survey, students will be asked to study building types (church, bank, house, library, school, etc.) as the materialization of key institutions in American life. Databases are organized to teach surveys and it became clear in planning this course that students would need an array of examples of building types for comparative purposes, in part because the literature on building types is still quite undeveloped.

The project has gone smoothly, although rather extreme cuts in the AVRL budget have slowed the project. Additionally, I was planning the course both for American Studies and American Cultures, but American Studies asked me rather late in the game to teach a different sort of course, which I was committed to doing. Therefore, I have not taught the course for which this project was intended. Nonetheless, the images have been invaluable in my general teaching and will continue to be as I move my pedagogy towards a more typological method. One small drawback that we have also encountered, but which can be easily fixed, is that SPIRO itself is a relatively weak search engine, whose keywords function needs improvement. We will need, for example, to do a better job with metadata, entering a range of keywords associated with building types, and this can only be done when the AVRL budget allows it.

I believe this initiative has been highly profitable for my teaching and will continue to bear fruit in the future, as students are able to use SPIRO for research. Just as importantly, I have applied some of these modes of thinking about research in the classroom to the American Studies course that I ended up teaching. For AS101, students wrote research papers on a broad range of topics, including building types of their choosing.

Submitted November 6, 2006 by: Andrew Shanken