

Adopted: May 25, 1999

ACADEMIC SENATE
OF
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
San Luis Obispo, CA

AS-527-991R&PDC

RESOLUTION ON
DEVELOPMENT OF A RESEARCH AND PROFESSIONAL DEVELOPMENT
INFRASTRUCTURE AT CAL POLY

Background Statement: In 1996, the Academic Senate reconfigured its subcommittees. From this process, the Research and Professional Development Committee was formed and given the charge to assist in the development of research policies for the campus. Faculty on this committee, over the past two years, began identifying barriers to research on campus through a campus wide survey, and has prepared recommendations for creating an environment that supports faculty efforts in their scholarly work.

- WHEREAS, Cal Poly is an institution known for its high quality of undergraduate education, where graduate programs have traditionally played a small role and faculty teaching of undergraduates has been the highest priority; and
- WHEREAS, The Cal Poly Strategic Plan outlines a greater emphasis on research and other scholarly activities by faculty in the future; and
- WHEREAS, The Research and Professional Development Committee was formed by the Academic Senate and given the charge to assist in the development of research and professional development policies for the campus; and
- WHEREAS, The success of research and professional development on campus requires an investment of time by faculty and students, allocation of space, and commitment of fiscal resources by the university administration; and
- WHEREAS, The processes of teaching, discovery, integration, and application through research and creative activities is crucial for the continued growth and development of a community of faculty and student scholars; therefore be it
- RESOLVED, That research and other scholarly activities be a factor in assigning faculty work loads; and be it further

- RESOLVED, That research and other scholarly activities be a factor in assigning faculty workspace, facilities, and equipment without compromising the quality of undergraduate education; and be it further
- RESOLVED, That campus resource allocations include considerations of research and other scholarly activities, without compromising the quality of undergraduate education; and be it further
- RESOLVED, That research programs and proposed development efforts be encouraged and supported; and be it further
- RESOLVED, That scholarly activities be given consistent recognition in retention, tenure, and promotional decisions at all levels of review; and be it further
- RESOLVED, That research opportunities be encouraged as a valuable component of undergraduate education; and be it further
- RESOLVED, That graduate curricula be encouraged and developed, including funding for recruitment of graduate students and for graduate assistants; and be it further
- RESOLVED, That the Academic Senate approve the attached recommendations for research and professional development at Cal Poly, and that these recommendations be forwarded to the President and Provost of Cal Poly.

Proposed by: Research and
Professional Development Committee
Date February 22, 1999
Revised: May 18, 1999
Revised: May 25, 1999

RECOMMENDATIONS FOR A RESEARCH AND PROFESSIONAL DEVELOPMENT PROGRAM AT CAL POLY

Cal Poly Mission Statement

As a predominantly undergraduate, comprehensive, polytechnic university serving California, the mission of Cal Poly is to discover, integrate, articulate, and apply knowledge. This it does by emphasizing teaching; engaging in research; participating in the various communities, local, state, national, and international, with which it pursues common interests; and where appropriate, providing students with the unique experience of direct involvement with the actual challenges of their disciplines, in the United States and abroad.

Importance of Faculty Scholarship

In *Scholarship Reconsidered* (citation), Ernest Boyer emphasized that teaching and research are both important scholarly activities of the professorate. In its strategic plan, Cal Poly has encouraged the four scholarships as defined by Boyer;

"Cal Poly endorses the broad definitions of the four types of scholarship set forth in the Carnegie report. The following thoughts extracted from the Carnegie report summarize the mission of teaching and scholarship at Cal Poly."

The scholarship of Teaching: As a scholarly enterprise, teaching begins with what the teacher knows. Those who teach must be well-informed and steeped in the knowledge of their fields. Teaching is also a dynamic endeavor which must bring students actively into the educational process. Further, teaching, at its best, means not only transmitting knowledge, by transforming and extending it as well. In the end, inspiring teaching keeps scholarship alive and inspired scholarship keeps teaching alive. Without the teaching function, the continuity of knowledge will be broken and the store of human knowledge diminished.

The scholarship of Discovery: comes closest to what is meant when academics speak of "research". This scholarship contributes not only to the stock of human knowledge, but also to the intellectual climate of the University. Not just the outcomes, but the process, and especially the passion, giving meaning to the effort. The probing mind of the researcher is a vital asset to Cal Poly, the state, and the world. Scholarly investigations and/or creative activity, in all the disciplines, is at the very heart of academic life, and the pursuit of knowledge must be assiduously cultivated and defended. Disciplined, investigative efforts within the University should be strengthened, not diminished. Those engaged in the Scholarship of Discovery shall ask: What is known and what is yet to be discovered?

The scholarship of Integration: involves the serious, disciplined work of interpreting, drawing together, and bringing new insight to bear on original research. This scholarship can involve doing research at the boundaries where fields of study converge, or it can involve the interpretation and fitting of one's own

research -- or the research of others -- into larger intellectual patterns. Integration means making connections across the disciplines, placing the specialties in larger context, illuminating data in a revealing way, often educating non-specialists, too. Those engaged in The scholarship of Integration shall ask: What do the research findings mean and is it possible to interpret what has been discovered in ways that provide a larger, more comprehensive understanding?

The scholarship of application: involves using knowledge to solve problems. This scholarship is a dynamic process where new research discoveries are applied and where the applications themselves give rise to new intellectual understandings. This scholarly activity, which both applies and contributes to human knowledge, is particularly needed in a world in which huge, almost intractable problems call for the skills and insights of university faculties. Those engaged in the scholarship of application shall ask: How can knowledge be responsibly applied to consequential problems, and how can social, economic, and other problems define an agenda for scholarly investigation?

Cal Poly continually seeks ways to integrate the four types of scholarship, for the purpose of maintaining high quality academic programs. The benefits of faculty scholarship are many. Some examples are:

- Scholarship enables faculty to maintain currency in their disciplines
- Scholarship keeps teaching relevant and lively
- Scholarship can be revenue generating
- Scholarship provides opportunities for undergraduates to engage in sustained work on demanding, multifaceted problems in which they learn to define and communicate their own solutions, and to develop critical thinking and analytical skills.
- Scholarship provides opportunities for students to acquire core competencies that are valued by employers.
- Scholarship enhances the reputation of the individual and the University
- Scholarship provides an avenue for creativity and self expression
- Scholarship provides a means for faculty to reflect on the learning process
- Scholarship provides opportunities for interaction with working professionals and with scholars at other Universities
- Scholarship provides for extended individual interaction between faculty and students

The National Science Foundation recently undertook an extensive review of science, mathematics, engineering and technology education. Its report; Shaping the Future: New Expectations for Undergraduate Education in Science, Mathematics, Engineering and Technology, stated that; "all students have access to supportive, excellent undergraduate education in science, mathematics, engineering, and technology, and all students learn these subjects by direct experience with the method and process of inquiry. Every student should be presented an opportunity to understand

what science is and is not, and to be involved in some way in scientific inquiry, not just a 'hands-on' experience."

Need for Policy

To operationalize this commitment to scholarship, Cal Poly needs to develop new policies and revise existing policies to support scholarly activities. A recent survey conducted by this committee of the Cal Poly faculty revealed that although there is some level of support for the research activities of its faculty, Cal Poly does not provide the necessary support to meet the professional development needs of faculty and students in the area of research. The following barriers to professional development were identified by the faculty survey:

1. Unavailability of funds to maintain a professional development program;
2. Lack of policy for research/creative activity space allocation;
3. Inequitable teaching loads;
4. Inadequacy of "seed" funds to develop or expand creative/investigative activities;
5. Insufficient support for graduate courses and programs;
6. Lack of standardized RPT criteria and acknowledgment of research as a valued activity;
7. Unavailability of functional, "supportive" intellectual environment;
8. Ambiguous policy regarding intellectual property of inventors.

Recommendations of the Research and Professional Development Committee

1.0 Make funds available to maintain a professional development program:

It should be the responsibility of each college to allocate and administer resources to maintain a professional development program. It is recommended that such resources be allocated to faculty based on professional progress and productivity.

2.0 Provide space for creative/investigative activities:

It is recommended that each college ensure that adequate space is provided to support creative and scholarly activities, and develop criteria for allocating such space to its faculty and students.

3.0 Equitable teaching loads:

Use flexibility in assigning faculty work loads to support scholarship. Scholarship and creative activities represent significant and valuable contributions to the University, and should be recognized in assigning faculty work loads. Efforts should be made in the assignment of work loads (e.g.; numbers of courses requiring preparation, contact hours, class size, committee assignments) to ensure that all faculty, and particularly junior faculty, have quality time to devote

to the pursuit of their scholarship. In addition, junior faculty should be offered a reduced teaching load in their first year of employment.

4.0 Make available creative/investigative "seed" funds:

Cal Poly should establish a campus wide research fund to support the initiation of research programs by faculty, and in particular, junior faculty. These funds would supplement funds currently available through programs such as the State Faculty Support Grants Program. In addition, start up funds should be made available for new or junior faculty, and should be offered as part of the recruitment package.

5.0 Promote graduate curricula:

Graduate programs are an important complement to faculty scholarship. Resources should be dedicated to strengthening, expanding and initiating new graduate programs, particularly in disciplines relevant to the polytechnic emphasis of the campus. Since graduate level courses require a greater in-depth coverage of the subject matter and a greater student-teacher interaction, they should be given an additional weight factor when calculating WTU's.

State of California
Memorandum

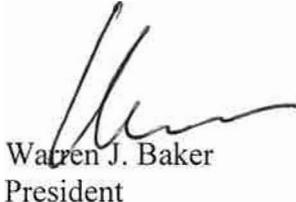
CAL POLY

SAN LUIS OBISPO
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To: Myron Hood
Chair, Academic Senate

Date: August 30, 1999

From: Warren J. Baker
President



Copies: P. Zingg, D. Conn,
P. Bailey, W. Boynton,
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Subject: Response to Academic Senate Resolution *AS-527-991R&PDC* - Resolution on Development of a Research and Professional Development Infrastructure at Cal Poly

This will acknowledge receipt of the above referenced Academic Senate resolution. I would like to commend the Academic Senate, and particularly the Research and Professional Development Committee, for taking the initiative in affirming the importance of faculty research and scholarly activity to the University. Your affirmation reflects my own appreciation of this value, which I have communicated to the campus on many occasions. Your placement of these activities in the context of a predominantly undergraduate institution and our own mission makes the resolution particularly valuable. I am committed to working together with the Provost and the academic deans to create an infrastructure that will appropriately support the research and creative activities of our faculty.