ACADEMIC SENATE
of
CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO

AS-114-81/RC
April 14, 1981

RESOLUTION ON THE ROLE OF RESEARCH

RESOLVED: That the Academic Senate accept this document from the University Research Committee as the guiding philosophy for encouraging research as one mechanism for professional growth of faculty at Cal Poly, San Luis Obispo; and be it further

RESOLVED: That this document be forwarded to President Baker; and be it further

RESOLVED: That the Chair of the Academic Senate appoint a committee and charge this committee to develop a comprehensive position statement on faculty professional development.

APPROVED May 5, 1981
ROLE OF RESEARCH AT
CALIFORNIA POLYTECHNIC STATE UNIVERSITY,
SAN LUIS OBISPO

Report of the
UNIVERSITY RESEARCH COMMITTEE
February 4, 1981
(Revised April 14, 1981)

INTRODUCTION

In the fall of 1979, the University Research Committee received a charge from President Baker to develop a statement on the role of research at Cal Poly. A draft was prepared and distributed widely to faculty, consultative staff, and administrators for comment in the fall of 1980. The following statements incorporate many of these comments as well as the Research Committee's evolving views on this subject.

It is University policy that professional growth play an important role in evaluating the faculty at Cal Poly. Each department must ultimately decide how well an individual faculty member fulfills its professional growth requirement. The University Research Committee asserts that a faculty member's original contributions to his or her field is an excellent - though not the only - measure of professional growth.

To clarify the role of research in professional development, this report will:

1. Define what shall be meant by "research" at Cal Poly,
2. Summarize the benefits to be derived when a portion of the faculty is actively engaged in research activities,
3. Clarify what role research can play in the professional growth of Cal Poly faculty,
4. Identify the more serious impediments a faculty member faces when doing research at Cal Poly, and
5. Offer some solutions to these impediments with the hope that more solutions will be forthcoming as discussions on these matters continue.

DEFINITION OF RESEARCH

Although the ultimate definition of "research" may vary with discipline, for the purpose of this paper, the activities listed under "A" and "B" constitute the definition of "research."

A. Problem Solving: As faculty become involved in professional activities, problems or opportunities may emerge that require a creative activity for solution. Creating solutions to the immediate problems of the classroom, business, industry, or government through applied research and development activities can be a productive area for professional growth.

B. Research: Faculty may pursue classical research activities, utilizing traditional approaches in the field, laboratory, computer center, or library to create new and generalizable knowledge. Similarly, faculty in the humanities and arts who develop new art forms and expressions are pursuing a form of research appropriate to their discipline.
BENEFITS OF RESEARCH

The University Research Committee recognizes that undergraduate instruction is the primary purpose of the institution. Within this context, research can produce several benefits: 1) increased instructional effectiveness and relevance of the curriculum; 2) enhanced placement potential for Cal Poly graduates; 3) improved opportunities for accreditation of academic and professional programs; 4) augmented institutional resources through grants and contracts; and 5) greater attractiveness of the University to qualified faculty.

ROLE OF RESEARCH IN PROFESSIONAL GROWTH

The magnitude of the role research can play at Cal Poly is largely determined by the University's place in the hierarchy of public postsecondary education in California. The Donahoe Act (as reflected in the Education Code) assigns the primary responsibility for research to the University of California as follows: "It (UC) shall be the primary State supported academic agency for research." Of the California State University and Colleges, Title 5 states: "Faculty research is authorized to the extent that it is consistent with the primary function of the California State University and Colleges and the facilities provided for that function" (Sec. 40050).

Title 5 authorizes Cal Poly to pursue research in much the same language that it authorizes the University to emphasize its traditional areas of strength. And yet, that authorization has never been fully acted upon.

Research can be an important component in the professional growth of Cal Poly faculty. Consequently, the needs of those involved in research should be given a high priority. This priority will not be equal to that of instruction; however, administrators and department heads should recognize the values inherent in research activities and do their best to encourage those faculty who choose to pursue such activities. Because of the large teaching load and special commitment that Cal Poly faculty have to excellence in undergraduate instruction, it is recognized that some faculty will choose avenues of professional development other than research. It is important therefore to maintain an appropriate balance of these activities to keep these priorities in perspective.

IMPEDEMENTS TO RESEARCH

In its study, the University Research Committee identified a number of impediments to the development of research. The major impediment, of course, is that the State budget provides no funds for faculty time or specific facilities to pursue research. Whereas the University of California is provided with a lighter teacher load and specialized research facilities, the California State University and Colleges' research program is dependent on non-State funds for faculty time and materials support. Given current teaching loads, faculty who pursue research must do so either on an overload basis, or on released time paid for by an outside grant. Faculty may use currently available facilities, but if specialized facilities are required, they must come from sources other than the general fund.

From the above, a number of problems and impediments have resulted:

1. Faculty self-selection: Many faculty chose Cal Poly solely because of their dedication to undergraduate instruction and not as a place also to pursue research.

2. Lack of incentives: Research is not uniformly used as one of the criteria for retention or promotion.
3. Heavy teaching load: Loads average more than 12 WTU's per quarter, and assigned time for research has rarely been granted.

4. Space-use policies: Policy favors teaching over research in the allocation of office and laboratory space, almost to the exclusion of any research.

5. Inadequate laboratory space: Laboratories are heavily utilized for teaching. There are too few wet labs. No labs are primarily research labs.

6. Inadequate computing resources: Faculty access to the Computer Center is limited; the policy prohibiting public use of the University's computer frustrates its use for consulting.

7. Insufficient internal funds for supporting and encouraging research: Discretionary funds are extremely limited. Unallocated overhead is used for a variety of purposes, often not in support of research. Operating expense funds are strained even in support of the instructional program.

8. Inadequate clerical support: Departments lack staff resources to assist in the preparation of proposals and manuscripts or to assist with the administration of projects lacking their own support staff.

9. Size of graduate program: Programs lack sufficient graduate students to justify courses closer to the frontiers of the discipline and to participate in research can create an impediment.

10. Limited track record: Sponsors do not see the institution as one having a research capability.

11. Teaching pool: Replacements for researchers on released time can be difficult to find.

12. Inadequate library research collections in some areas: Through interlibrary loan, and computerized data bases, the library has access to a vast resource, but the delay can be a problem.

13. Travel funds: These are inadequate to support research and professional development.

14. Disparity in compensation rates for faculty doing research vs. teaching in the summer: Because of federal regulations, faculty who do sponsored research in the summer are paid about 15 percent less than their counterparts who are teaching.

15. Public image: Research at Cal Poly has low visibility in the community and the state.

RECOMMENDATIONS FOR ENHANCING THE RESEARCH ATMOSPHERE

The administration of Cal Poly should treat professional development as a high priority, second only to our teaching mission. Therefore this University must seek to create a campus environment which facilitates creative contributions. Attitudes that relegate research to a suspect activity must be dispelled; resources that could
be used for research with little negative impact to the institutional program must be made available; faculty directing energies to research must be encouraged and aided by administration and support staff at all levels. The securing of additional resources to promote professional development must be a high priority for the University.

Four general areas need attention in order to create an enhanced research environment:

A. The development of human resources. It is important that the University have realistic expectations about what can be accomplished in the development of its human resources within the constraints of the CSUC system. Immediate efforts to encourage research could best be directed towards the junior faculty. Many sponsors have programs for promising new investigators that do not demand a proven track record. Junior faculty should be made aware that benefits to professional growth will continue to accrue if they put forth research efforts early in their careers. Job descriptions for new employees could clarify that professional growth will be expected for retention and promotion.

B. The development of physical resources. Plans need to be made and pursued for the identification, conversion, and/or construction of multi-purpose research facilities which can be used as centers for research, as well as for interdisciplinary problem-solving activities. Such a center or centers would create an identity for campus research activity which, because of its generally applied characteristics, could be unique in California post-secondary education. Such centers would offer effective utilization of research equipment purchased through sponsored projects for both teaching and problem-solving activities.

C. The development of a secure psychological climate for research. The University in some measure still nurtures an attitude that tolerates, but does not encourage, research. This attitude is encountered among academic administrators, as well as among various support units on campus. Tight budgets, of course, produce problems for the instructional as well as the research program, but it is difficult for researchers not to feel singled out if they see themselves as involved in an "un-Cal-Poly-like" activity. Administrators and support staff need to be informed that the University now supports and actively encourages research activities as important elements in the continued success of this campus and that faculty so involved have a legitimate call upon the resources of the campus.

D. The development of interaction and cooperation among faculty of various disciplines. The University, because of its polytechnic orientation, is ideally suited for mission-oriented research. Just as Cal Poly has a special instructional niche, so it also has a unique research resource to offer the State, business, and industry. An active development effort needs to be mounted to bring the problems of the State, the federal government, and industry to the campus for study. Such sponsored projects can contribute in important ways to building the institution's intellectual and physical capabilities as well as improving interactions and cooperation among faculty.
Given these areas of need, the University should consider the following changes:

A. The quality of faculty professional development should be an important criterion for personnel actions; recognizing the unique history of each Cal Poly faculty member.

B. Greater use should be made of current flexibility in the allocation of resources. For instance, the use of assigned time for instructionally related research is permitted, but little utilized. Such mechanisms for supporting research should be publicized and promoted.

C. More funds should be made available to support campus research. Increased funds for CARE Grants are especially necessary, as are funds to support the costs of research development activities.

D. Campus researchers should have access to facilities and services wherever possible and practicable. To ensure access, departmental administration should seek actively ways to accommodate the needs of researchers.

E. The library acquisitions budget should be increased, and funds should be provided to subsidize the use of computerized information retrieval data bases.

F. Computer Center capabilities need to be augmented and made more accessible. The new central batch system may provide greatly improved support.

G. Private funding for both research facilities and faculty time should be sought. Buildings, as well as specialized laboratories, are needed.

H. Expanded organizations for the obtaining and administration of sponsored programs, including the possibility of a separate auxiliary unit specializing in grants and contracts, should be implemented.

I. Research and the results of research efforts should be widely publicized. Publicity could include a newsletter, awards for recognition of special contributions by the faculty, systematic publicity through the local newspapers, and distribution of summaries of University research activity.