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Special Theme Issue:
Scholarly and Creative Activity

**A Word from the
Faculty Coordinator**

Dr. Andrew Gill



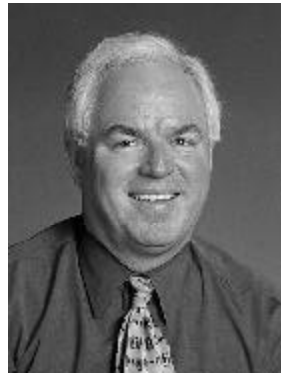
Andrew Gill is a professor with the Department of Economics. He currently serves as Faculty Coordinator for Scholarly and Creative Activities and is a co-editor for Contemporary Economic Policy. Andrew's research interests are in the areas of Labor Economics and Applied Econometrics.

Way back when, a well-known econometrician came to CSUF to deliver a seminar. At a luncheon sponsored by the Economics Department, our guest turned to me and asked why I had chosen to study labor economics. Well, I was young, I was new, and I was feeling a bit like a deer caught in the headlights. Nevertheless, I managed to respond, without a blink, that the data sets were better in labor economics. Understandably, my colleagues

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**A View From the University
Personnel Committee**

Dr. Ed Trotter



Ed Trotter is professor of Communications. He is chair of the University Personnel Committee and is past chair of the Academic Senate, the University Honors Board, the campus budget committee and other campus committees. He has been co-author of several research grants and contracts exceeding some \$400,000 in awards.

One of the longest running dramas on the Fullerton stage has been the production of *Scholarly and Creative Activity: The Publishing Perils of Pauline and Her Colleagues*. Professors aspiring to gain tenure and promotion reprise the play annually. Some call it a tragedy while others laugh at its comedic value. Thus, as with all works of beauty, it remains in the eye of the beholder. And certainly over the years the play has gone

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The Role of the Library

Dr. Patricia L. Bril



Patricia L. Bril is the Associate University Librarian of Pollak Library. Currently serving on CSUF's Instructional Facilities and "Rollout" Committees, she is a former member of the Academic Senate and previously chaired the Senate's Research Committee.

Supporting scholarly and creative activities of faculty is a fundamental responsibility of the University, and the Pollak Library serves a primary role in this endeavor. While no University Library—including those at institutions with large endowments and/or extensive research

programs—can be self-sufficient in meeting the many and diverse needs of its community, each seeks within the available resource base to provide the most responsive core of support possible. Selecting which materials and services best meet our university's needs, among the seemingly limitless array of choices, is our constant challenge, and one in which we regularly welcome the input of

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What Do We Want to Accomplish?

Sandra Sutphen



Sandra Sutphen is the Chair of the Academic Senate and Chair of the Department of Political Science and Criminology.

Those of us who have been privileged to serve on committees that assess professional records—the erstwhile “pissies,” department personnel and FMI committees, for instance—leave these experiences with a unanimous opinion: our colleagues are incredibly productive. They care about student learning and they engage in lots of research.

CSUF Faculty are productive researchers
There is actually “hard” evidence that support these opinions. When the WASC Task Force compared the data gathered from CSUF faculty with that compiled in a nationwide survey conducted by UCLA’s Higher Education Research Institute, our faculty published more and spent more time with students than the national average. According to the HERI survey, 42.6% of the national sample had published “books, monographs or manuals” in the past two years; nearly 62% of CSUF faculty had done so. Generally, our faculty published more articles and professional papers than the national norm, and spent more hours per week on scholarly and research writing. And while many faculty receive minimal if any sup-

port for research, as a group, we believe that research is highly valued by our colleagues. Interestingly, this is more true for men than women. To see the full analysis, visit the WASC Website. The HERI survey may be found at http://www.fullerton.edu/wasc/phase_ii/appendix/HERI_Faculty_Survey.pdf.

These data confirm what we think we know about the research culture here on campus. All of our official documents—our mission statement, our personnel policies, particularly UPS 210, our college’s goals and objectives—stress our mission of learning. But our real values lie in our research agenda. Ask any junior faculty member.

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From the Editor *A Funny Thing Happened on the Way to the Forum.*

Sorel Reisman

A few months ago Andy Gill called to ask me what I thought about the FDC’s new Research Coordinator position that was being advertised by Academic Affairs. I told him that I thought it was a hopeless task that no mortal could ever do well, and anyone taking the position was doomed to fail. This term “research” means so many different things on our campus, and is treated so differently in the RTP process from College to College, that I couldn’t imagine how one person could satisfy the needs of such a broad spectrum of definitions.

Sure enough, like most people, Andy ignored my advice, applied, and was selected for the position. In the few short months that I have been working with Andy in the Faculty Development Center, it is obvious to me that I was wrong. Perhaps the job is a difficult one, but

Andy’s enthusiasm for assisting faculty in their pursuits of scholarly and creative activities seems limitless. The programs he is defining and moving forward are certain to be helpful to new faculty as well as to old timers who want to try to stay young through creative academic pursuits. To this end, I invited Andy to help me to put together this special issue of the *Senate Forum* that you are now reading.

I have mentally categorized the articles in this issue into three groups. The first of these have been written by colleagues *actively and directly* involved in the pursuit of scholarly and creative activities. We are fortunate to have scholars and contributors such as these on our campus, and even more extraordinarily fortunate that they were willing and even enthusiastic about sharing their experi-

ence and suggestions with us. As I reviewed their papers, I was quite surprised to learn of their broad range of experience – from the playing fields of Fullerton to the rain forests of South America.

The second group of papers too is by faculty, but their contributions to this issue of the *Senate Forum* are revealing in a different way. These colleagues are kind enough to share their thoughts with us regarding the Academic Senate’s processes and procedures that reward our scholarly and creative activities. Finally, the third group of articles describes some of the resources at CSUF, available to us to help carry out our professorial responsibilities. There can be little doubt that all the Senate-passed resolutions in the world would be “academic” without strong university administrative support to help us.

One of the themes that struck me as I read through the articles is the strong relationship that exists between our missions of teaching/learning and scholarly and creative activities. It is clear that when we

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Faculty Research at a Comprehensive University

Dr. Kolf Jayaweera



Kolf Jayaweera is a professor of Physics and the dean of the College of Natural Sciences and Mathematics. He serves as a member of the Board of Directors of the Desert Studies Consortium, Ocean Studies Institute, and CSUF Foundation.

One of the fundamental purposes of a comprehensive university such as ours, is to develop a learning environment where faculty and students accept change, and acknowledge that the world of knowledge and creative acts are never static. Scholarship, in which research is a subset, by faculty involving students then is a very important component of such a university. At the core of the California State University Fullerton (CSUF) mission is a strong belief that scholarship is expected of faculty. The first goal of the CSUF Mission and Goals statement is to ensure preeminence of learning. To this end the campus integrates teaching, scholarly and creative activities, and the exchange of ideas. Then the campus defines several strategies to enhance scholarly and creative

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International Research

Dr. Robert Voeks



Robert Voeks is Professor of Geography and Coordinator of the Environmental Studies Program. His principal research interests are tropical forest ecology and cultural geography of Brazil and Borneo.

Looking back, my introduction to the opportunities for international research as a soon-to-be CSUF faculty member was mixed at best. As a recent PhD candidate in geography, I had been led to believe by my mentors that mine was to be a career of the mind and the field – tackling significant research topics, designing appropriate experimental designs, seeking external funding, and then journeying off to some exotic locale to investigate the problem. What a great life! That's why I got into geography; that's why most of us did. When I interviewed at CSUF in 1987, I had recently returned from nearly two years of fieldwork in Brazil. I assumed that it had been the first of many glorious field seasons.

This naïve view of my scholarly future was corrected in short order during the interview process; actually, even before. I was

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Research, Merit Pay and the Coach

Dr. Maryalyce Jeremiah

Maryalyce Jeremiah is the Senior Associate Director of Athletics at CSUF. She is a member of the Executive Committee of the Academic Senate, serves on the University Planning Committee, and is the Chair of the NCAA National



Division I Women's Basketball Committee that selects and seeds the 64 teams that play in the National Basketball Championship in March.

Sports of a school tell us something about the character of the social institution of higher education in America. How those sports are run, the behaviors that are tolerated or demanded, and the problems which remain unsolved tell us something of the nature of higher education and the American society on which it is dependent.

Donald Chu, Jeffrey Segrave, and Beverly Becke Sport and Higher Education, 1985, p. 26.

While this idea may be frightening to some, it is, at best, sobering to others, for it translates into both the best and worst about intercollegiate athletics. While the public trust in higher education in general has declined in recent years, the biggest challenge

for athletics is to further illustrate how it can be used effectively to assist higher education in fulfilling its mission.

Historically, athletic programs that were integrated into institutions of higher learning justified their existence based on several claims. Early on it was thought that athletics in a university had the potential to recruit students and to generate dollars. These two objectives ranked high at the time with leaders in higher education; therefore, athletics gained what proved to be a strong foothold into academia, much to the dismay of those who did not see the value of sports in an educational setting.

With the infiltration of the entertainment element, intercollegiate athletics programs
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The Importance of Research and Grant Support

Dr. Maria C. Linder



Maria C. Linder is Professor of Biochemistry in the Department of Chemistry and Biochemistry. Has served as a member of the Faculty Senate and on numerous university and department committees, including the Faculty Personnel Committee, and Faculty Research Committee. She is recipient of continual grant support from the National Institutes of Health, National Science Foundation, and others. She is a Member of the Nutrition Study Section at NIH, and various other grant reviewing committees. She is executive editor, Analytical Biochemistry, and was CSUF Outstanding Professor, 1985 and CNSM distinguished Faculty Member, 1997.

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The research tradition at CSUF

One of the strengths of our particular California State University campus has been the culture and tradition of recognizing research and scholarly activity as fundamental to our successes in teaching within our disciplines. This was one reason I felt I could grow and be happy here, when I was seeking a position in Southern California and considering leaving an Associate Professorship at MIT, in 1976. The department I was entering contained lively teacher scholars, in touch with the cutting edge of their disciplines. It was evident that research and scholarship were taken to be the foundation for good teaching and other professorial activities. I came to learn this was so because of the attitudes of the

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Needed: A Better Research Environment for Untenured Faculty

Dr. Bin Cong



Bin Cong is an Associate Professor in the Department of Computer Science, member of International Program Committee and Editorial Board for several major conferences and journals in Parallel and Distributed Computing.

Before joining Computer Science Department in 1998, I spent eight years at South Dakota State University and Cal Poly San Luis Obispo. This experience gives me the advantage of seeing the research environment at CSUF from different perspectives. I believe that the role of research should be related to the mission of the university, and it should be different from the one in the UC System. In my field, faculty need to pursue research and scholarly activities in order to keep up with current progress in order to

bring the most recent technologies into the classroom. The key is that the results of our faculty's research efforts should be to enhance their teaching and benefit our students.

My research experience at CSUF has been mixed. There is a reasonably good support environment in place here. The university provides quite a few small funding programs to support our research effort, and the staff at our Research and Grant office works very hard to help faculty in their efforts to obtain outside funding. It seems to me that our college and department are doing their best with very limited resources to help new and untenured faculty to start and continue their research efforts. On the other hand, there are many challenges for untenured faculty to improve themselves professionally and to conduct productive research. The following are just a few examples:

↑ The toughest thing for most new faculty is to find enough time to conduct quality research in their first couple of years at CSUF. A heavy teaching load can easily overwhelm someone without any teaching experience, in a school like CSUF. In a dynamic field such as Computer Science, it is hard for anyone trying to take on a research project if he/she has not closely followed progress in the field.

↑ It is extremely hard to find quality graduate students who can help faculty conduct meaningful research. Most of our graduate students have outside jobs; they just cannot devote the time necessary to a complex research project.

↑ There is little collaboration among faculty.

↑ It is hard to compete for Federal funding.

↑ Research is only driven by publications. I have been told many times that the most important measurement of a faculty

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Advice for New-Comers

Dr. C. Jessie Jones



C. Jessie Jones, Professor in the Division of Kinesiology and Health Promotion. She currently serves on the University Personnel Committee, University Advancement Committee, the University Institute for Gerontology, and conducts research in the area of delaying the onset of physical frailty in later life.

In 1992 I was hired as an Associate Professor for the Division of Kinesiology and Health Promotion (KHP) and Director of Gerontology Programs. The director position at the time was responsible for coordinating the academic gerontology programs, coordinating community outreach efforts for the Ruby Gerontology Center, and developing an interdisciplinary research agenda in gerontology. My current status at CSUF is Professor in the Division of KHP, co-director for the Center for Successful Aging, and acting coordinator for gerontology programs. My research agenda was, and continues to be, focused on reducing the onset of physical frailty among older adults. I have a strong belief that conducting applied research is a major responsibility of *all* faculty within the CSU System and that it enhances the teaching of course material.

Managing for Research

Dr. Stuart Ross

Stuart Ross is Director of the Office of Grants and Contracts. He is a member of several university committees or boards that relate to grants or research.



By most accounts the quality and quantity of research at CSUF ranks well compared to other CSU campuses and similar universities.

(For this article, “research” is defined to include creative activity in the arts and humanities.) There has been more externally supported research, as part of the growth in grants overall — from just over \$4 million in 1989-90 to almost \$12 million in 1999-00, and the CSUF research portfolio is broader still: funds are raised for research by University Advancement, research is done without external sponsor-

ship, intramural programs support student research, and the departments and colleges invest in research facilities. The growth of research programs greatly exceeds the growth of FTES and FTEF. We should congratulate ourselves on this progress.

Of course still more could be done to stimulate research — perhaps more intramural grants, more matching funds, more release time from teaching, more grants seminars, or more grant writers. Such efforts would indeed help. But I believe the university is at a point where the more important questions concern how CSUF provides management support for the research enterprise.

Research is a management exercise as well as an academic one. For the individual researcher and for the university, it involves many relationships — with reviewers and editors at least, and often also with collaborators, accountants, regulators, publicists, and sponsors. Doing research also has real effects — on industry, society, students, and

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What is “good” about the research environment and faculty support at CSUF is strongly influenced by the College/Department with which the faculty member is affiliated. As a faculty member for the College of Human Development and Community Service (HDCCS) within the Division of Kinesiology and Health Promotion (KHP), I have had a supportive environment to conduct my research. In 1993, Acting Dean of Humanities and Social Science (H&SS), Dr. Chris Cozby, approved the use of some of the facilities at the Ruby Gerontology Center (RGC) to develop the Lifespan Wellness Clinic as a facility to support my research agenda. In addition, Dr. Tom Klammer, Associate Dean of H&SS, during the era of Dr. Don Castro, championed my research, supported an increase in my assign time from .2 to .4 as the Director of Gerontology Programs, and was very helpful in facilitating collaborative research efforts between KHP and Gerontology Programs.

The Dean of HDCCS, Dr. Soraya Coley also provided release time and funding for some equipment to conduct my research, and travel money to present results at professional conferences. In addition, when I asked her about support for hiring a person as a gerontology research scholar to help us at the Lifespan Wellness Clinic, she made it happen. Most importantly, she has encouraged and supported my interdisciplinary interests in the field of gerontology, and was instrumental in the approval process for the new Center for Successful Aging.

I have also received outstanding support for my research agenda from the Division Chair of KHP, Dr. Roberta Rikli, and from the faculty. Prior to coming to CSUF, Roberta and I had started to conduct research together. Because our research skills have complimented each other, we have been quite successful with our research projects and publications. In addition, the faculty of KHP is a super

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Thinking Big, Taking Small Steps

Dr. Walter Hettich



Walter Hettich is a professor with the Department of Economics. Among his recent publications is *Democratic Choice and Taxation: A Theoretical and Empirical Analysis* (co-authored with Stanley L. Winer), Cambridge University Press, 1999.

Research is largely a forward-looking enterprise. We want to test new ideas, extend existing theory, show old problems in a new light, find unexpected and surprising solutions. Yet looking ahead has to be done in the context of past work, of what others have created before us, of what has already been achieved. Without knowledge of the history of our fields, we lack needed

tools; we are likely to simply repeat solutions that already exist, or we fail to see connections and interpretations that would add much value to what we may produce.

The tension between future and past is only one of the tensions that arises in doing successful work. Another one that seems equally important to me is the opposition of big and small. By big, I mean thinking big, taking on large questions, going for a major contribution. Small, on the other hand, refers to the taking of limited, manageable, measured steps. As I use the word here, we work on a small scale if we decide to solve workable problems, to take limited risks, to approach what seems doable in a reasonable amount of time.

I shall argue in this short essay that the contradiction between big and small is only an apparent one. In fact, I would like to encourage my colleagues, particularly the younger ones, to devote more attention to the big topics, and to questions that may seem to be too large to be solved readily in one step. I do believe that we can have both, the big and the manageable, if we do it right. To me this seems one of those rare instances where we can have our cake and eat it too.

Since my argument is based on my own experience, I will have to refer to my own work. I have noticed recently that at my age it becomes inevitable to look back occasionally at what one has accomplished and achieved. When I was in such a retrospective mood the other day, I realized that my own research experience can be separated into two different periods. A significant shift occurred in the early 1980's when I turned my attention to the topics that have occupied me since. Somehow, work became more fun from then on; I felt I was doing something more significant; something that would lead to further interesting work; something that had its own momentum. This is not to say that I had not been successful before by academic standards; I had readily passed the various hurdles for promotion before the break in my thinking occurred. But the shift created a new dynamic, one that I felt would carry me to where I really wanted to go, even though it was not entirely clear at the time exactly where that would be.

What happened is simply this: I began to think big. It is not always easy to explain to colleagues in other fields what "big" means in one's own discipline. I work in the area of public economics where we use the tools and methods developed by economists and statisticians to understand and explain public policies that have a major economic component. It is an old field; historians of thought trace it back at least to the so-called cameralists, civil servants and statesmen of the 17th and 18th centuries,

who left us voluminous writings on fiscal matters. Like most subjects, my field undergoes periodic changes in methods and viewpoints, as well as changes in focus and in scope of interest among researchers.

What I saw in the early 1980's was a major gap in understanding. At least it appeared to me that way. Several mathematicians, political scientists and economists had developed an interesting new body of theoretical work dealing with voting processes in the preceding two decades. And yet, no one was using this work to approach the major problems of applied public economics in a comprehensive and unified manner.

Could this highly theoretical work, or the ideas behind it, be used to solve the more applied problems in my field in a systematic and comprehensive way? The question tantalized me. And it energized me. I wanted to work on this, although I realized that it would be a big undertaking. It was my good luck that a friend and colleague of mine who teaches in Canada also began thinking along the same lines, and that we were subsequently able to combine our energies to tackle many of the questions that presented themselves in joint work.

Thinking big is one thing; being a successful researcher on an ongoing basis is another. Luckily, I had enough experience at the time to realize that I would have to proceed in manageable steps. In my field, research is published primarily in the form of articles, each representing a limited, but well-defined piece of work that must stand on its own. The challenge was to break down large questions into smaller ones, without losing the bigger purpose (a purpose that did not have to be disclosed to the reader or referees).

To my surprise, I found that the combination of big and small made me a better and more motivated researcher. I became

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Thinking Big, Taking Small Steps

more interested, for example, in learning new techniques since it was clear that I could use them again later. New topics presented themselves more readily, since the larger questions remained in my mind, as I worked on particular aspects of a topic. And I became more aware of different audiences that could be reached with the work that I was doing. Above all, the original challenge was always there, something still to be dealt with in an integrated manner.

I write about my own experience since I would like to use it to motivate others to look toward big questions in a focussed way, even while proceeding in smaller, manageable steps. I realize, of course, that all of us have to live within institutional restrictions; that there are requirements and timetables for promotion; and that there are other duties in our careers that command our attention. Yet I believe that it is important to see that these restrictions, if we experience them as such, do not preclude us from thinking big, from making a significant contribution to the large questions in our disciplines.

Of course, we need persistence to pursue a grand strategy, even if we do it in measured and linked steps. Yet the rewards can be great. They go well beyond the added momentum in the research process. Others in the larger academic community begin to take notice of our point of view as we develop it in more detail, and as we treat different aspects that require solutions. As a result, we may be invited to participate in conferences, or to contribute to books of collected articles, since our views become acknowledged and valued (or valued enough to be discussed and perhaps opposed). And as our body of work grows, we have the possibility to rework earlier contributions and to combine them with new material into a synthesis that presents our full vision. To do this can give us a satisfaction and appreciation of our field and our own accomplishments that separate, unconnected steps can never offer.

In many disciplines, research is an individual endeavor. Yet it does take place in a community of researchers. Can we do anything as a community of scholars to foster the dual skills of thinking big and pro-

ceeding in manageable steps?

I believe that it would help greatly if we were more open to discussions that place our work in a larger context, even though such discussions have of necessity a certain vagueness to it. In a field such as economics, a knowledge and command of quantitative and mathematical tools remains, of course, important — I am not calling for replacing well-focussed presentations with what is merely speculative. But I would like to encourage a wider recognition of the very real advantages of working in a larger context, particularly among those of my colleagues who are at the start of their research careers.

In my own career, this recognition came only at a later stage, perhaps because few of my teachers or colleagues shared bigger visions with me, or helped me to see, how thinking big, combined with smaller steps, can be a practical and rewarding strategy that adds much to one's enjoyment and success in doing creative work. Based on my own experience, it is a strategy that I can highly recommend. ■

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Managing for Research

the subjects of the research. Coping with those relationships and responsibilities and maintaining a parallel commitment to excellent teaching, within the constraints of modest resources, is a substantial management job. The CSUF Foundation, the University Advancement (UA) Foundation, and many parts of the university are necessarily involved.

Setting Priorities

As research groups and projects have grown in size, their effects and their needs become significant at a level that requires campus-wide attention. It is now common for research projects to include many faculty members over many years, and many organized institutes and centers have been established in the past several years as a result of research activities. The Minority

Scientist Development Program, the Center for Demographic Research, the Keck Center for Molecular Structure, the Center for Children who Stutter, the Gerontology Institute, the Institute for Economic and Environmental Studies, the Center for Insurance Studies, and the Social Science Research Center are prominent examples.

Unfortunately, the establishment of formal research organizations is not always governed by clear rationales or priorities, a few meetings and UPS documents notwithstanding. Centers and institutes appear to be separated more by terminology than by substance. Some of these groups succeed and some flounder; most are understaffed and underfunded. We need more clarity about the rules for existence of these groups — what should be the thresholds for exist-

ence and the criteria for termination, and what financial and management commitments the university is willing to make.

It is necessary to be clear about the general directions of research that will receive preference for support, because the university cannot support all kinds of research in all fields. Here are some of the questions that should be addressed:

↑↑ When will we support high-cost specialized facilities?

↑↑ Should product testing be part of our portfolio?

↑↑ Should we favor research that affects Orange County?

↑↑ Should research relate to some appropriate theme?

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A View From the University Personnel Committee

through many rewrites. It remains a work in progress, ever changing and ever mysterious, particularly to the uninitiated.

All kidding aside, it is serious business, seemingly fraught with peril. As this year's chair of the Faculty Personnel Committee, I have been asked to provide a perspective on the role of scholarly and creative activity in the faculty personnel process. We all understand that there are three legs in the stool of faculty performance – teaching, scholarly and/or creative activity, and service. My focus will be on the second of those three, fully understanding that all are vital and necessary components of a successful faculty career.

Because we are a collegial institution, governed for the most part by peers, we must first understand that campus expectations of faculty performance are grounded primarily in our collective values of what it means to be a professor. Clearly, intellectual activity judged by one's peers is a very strong component of those expectations. And further, as a collegial institution, we have committed our expectations to a permanent record, in this case embodied in a University Policy Statement (UPS) which details how faculty will be evaluated for retention, tenure and promotion (RTP).

UPS 210.000, *Faculty Policy and Procedures*, a product of the Academic Senate and its committees and approved by the President of the University, is the governing document for all faculty personnel decisions. UPS 210.000 (Section IV.C.2) is clear in laying out campus expectations for faculty: "Each faculty member shall establish a record of scholarly/creative endeavor that generates, integrates, and/or disseminates knowledge." And, that section continues: "A successful faculty member has a well-defined and focused scholarly/creative agenda, is committed to continued growth and accomplishment, and has produced exhibitions, performances, peer-reviewed publications, and/or other high quality accomplishments."

Therefore, it is clear. All faculty undergoing personnel review *shall* demonstrate that they are able to produce intellectual products that make a contribution to their discipline. But note that not all disciplines are the same. Some, performance-based perhaps, would ask faculty to engage in creative activities that would lead to public exhibitions of their work, perhaps to critical audiences. Others, however, might ask for work that remains fully within the professional confines of the field, intended solely for fellow academics. In some disciplines there is a long tradition, often reflected in department standards, of the requirement to obtain grants; in others such an outcome would be all but impossible to achieve. It is this rich diversity of intellectual contributions to our world that should be valued by a university first and foremost.

That being said, however, that is not an excuse to do nothing. Or even to do little. We are a vibrant community of *thinkers, doers, creators, reflectors, and experimenters*. We have an obligation to assure our students and our colleagues that we remain intellectually alive. The only way we can do that is to subject our work to peer review of some sort. And that is the only honest and fair way the campus community has of determining the value of the scholarly and/or creative activity. After all, most of us are employed on this campus for the very reason that we do have a specialty that is unique to ourselves with respect to our colleagues. Those peers who pursue similar avenues of research or creative activities on other campuses or within kindred professional communities best judge the value of our intellectual efforts.

So, if you are a newer faculty member, what advice might an old geezer give you as you face what looks like a daunting task of producing a level of intellectual activity sufficient for the next personnel hurdle?

1. Set yourself an agenda with a timeline of what you want to accomplish. This is best laid out in the development plan each newer member of the faculty must now complete. Remember, the purpose of the

development plan is to reduce ambiguity at the time of the most crucial personnel decisions—tenure and promotion. A clear agenda and record of accomplishment of peer-reviewed activities is crucial.

2. Make sure you have documented the nature of the forum in which the work appears. Some questions that should be answered are: Was the work judged blindly as is the case of most scholarly journals? How was the work solicited? For example, in the case of an invited paper or article, was there more of a review than an editor's invitation? Is the forum a regionally, nationally, or internationally recognized venue? A journal that circulates primarily in California would necessarily carry less weight than one that is published by the most recognized organization in a discipline.

3. Document your contribution to the piece. We have a bit of a dilemma on campus in that we have espoused the goal of working collaboratively but at the same time want to see the ability of a faculty member to conduct independent scholarly and/or creative activity. Nevertheless, it is crucial that you document your work. This is best done by some correspondence from co-authors or other collaborators. In lieu of that, there is a form available in Faculty Affairs and Records that may be used.

4. Consult your department standards for guidance as what level of performance is appropriate for you.

5. Please understand that the vast majority of faculty members undergoing review are successful. And, contrary to popular myth, more of those who are not successful perish not from failure to publish but inadequacies in the classroom. In other words, "Don't worry, be happy."

And finally always ask yourself, "What pitfalls lie out there that you might avoid?" ■

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Faculty Research at a Comprehensive University

activities, one of which is the support of faculty research and grant activity that leads to the generation, integration and dissemination of knowledge. Another is to cultivate student and staff involvement in faculty scholarly and creative activity. Several colleges across the campus, especially the College of Natural Sciences Mathematics (CNSM), recognize that original research between faculty and their undergraduate students is a very effective way to energize the undergraduate experience and collegial environment. We, in CNSM, subscribe to the importance of scholarship expressed by Ernest Boyer in his monograph, *College: The Undergraduate experience in America*, that “Scholarship is not an esoteric appendage; it is at the heart of what profession is all about ...” and “... to weaken faculty commitment for scholarship is to undermine the undergraduate experience regardless of the academic setting.” In many academic disciplines, especially in the Sciences and Mathematics, research productivity is the measure of a scholarship.

Often we are confronted with a fallacy that teaching and research are at odds with each other. Research is done at the expense of teaching, and vice versa. Many often subscribe to the erroneous belief that faculty who do research are poor teachers or are not interested in teaching, and those who are good teachers are poor researchers and are somehow inferior to those who do research. Faculty and administrators often tend to put teaching and research into separate compartments, and evaluate faculty in each of these categories as if these two are not intertwined. Needless to say that at comprehensive universities such as CSUF, the primary activity of faculty is teaching. This builds on the concept stated by Donald Kennedy, former president of Stanford that, “Teaching in all its forms is the primary task of higher education.” Excellence of teaching is fundamental to the expectation that when a student graduates with a baccalaureate de-

gree, the student has understood the basic concepts of the discipline and has currency in his/her major.

However it is also important that we accept that scholarship is not merely a second cousin to teaching, but rather an integral part of it. As teachers we expect our students to develop the techniques, skills, and enthusiasm for acquiring and ordering knowledge. We expect our students to test hypotheses, to raise questions, to seek out truth, to separate fact from opinion and correct falsehood. We want our students to identify problems, design experiments, and generate reproducible results. These expectations are the fundamentals of basic research and the underpinnings of a true inquiring mind. How can a faculty member demand inquiry from a student if he/she is not engaged in the same quest? How can a faculty member be a good teacher if he/she is not engaged in the advancement of knowledge? The artificial separation between teaching and research should have no place at a comprehensive university. I submit that excellence in scholarship should be the foundation for excellence in teaching. This is true in every discipline, since knowledge grows more rapidly than textbooks can be published.

At the College of Natural Sciences and Mathematics every department is firmly committed to the principle that good teaching is based on good scholarship. Furthermore, because research experience for students is at the heart of its academic programs, all departments are committed to supporting active and productive research programs in which students are involved. At CNSM, we have integrated faculty research into the undergraduate curriculum and made research an essential part of the baccalaureate experience of students. The importance of original research in the Retention Tenure and Promotion (RTP) process of faculty is articulated in every Departmental Personnel Committee (DPC) document of the five departments at CNSM. For example: the Biology department document speaks for the entire College when it says that, “No matter whether the research is directed at devel-

oping fundamental understanding of biological processes or at creating innovative ways to help students learn, *original research is the basis for scholarship in the discipline.*” Active involvement in original research keeps faculty members at the forefront of their discipline, and thus qualifies them to be professors at a university.

The faculty in College of Natural Sciences and Mathematics recognize the very major role that research plays in the intellectual growth and development of technical skills of our students. Two departments require research units for graduation, and the other three provide research courses as electives that count toward the major degree. This involvement of undergraduates in real, publishable research is funded through extramural research grants awarded to faculty, and through various training grants from Federal agencies such as the National Science Foundation and the National Institutes of Health, which in turn depend upon the research, publication, and grant activities of our science and math faculty.

To provide a specific example of just one of our undergraduate research grant-funded programs, the Minority Student Development (MSD) Program funded for the past 10 years by the National Institutes of Health, currently supports academic and summer research of 24 minority students from the departments of Biology and Chemistry /Biochemistry. Many of the students who participated in this program have gone on to graduate or professional schools or industry, and some are now practicing professionals. MSD students appear as co-authors on scientific publications, and make presentations at regional and national scientific meetings. This degree of productivity of undergraduate students, which reflects the quality of the research experience provided, is possible only with faculty who are actively engaged in research, and who have well equipped and well-supplied laboratories supported by external and internal funds.

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Faculty Research at a Comprehensive University

The true impact of undergraduate research goes well beyond producing publishable scientific results. Through questionnaires, interviews, and other assessment instruments we have been able to establish that the single-most important factor in a student's selection of a career path is that of the faculty research mentor. Further, students involved in undergraduate research show greater interest and better academic performance in their class work. By doing research, students gain in their problem-solving, organizational, critical thinking, and analytical skills. We also find that students gain in confidence about their abilities to understand and do science. Because we require frequent written and oral presentations, we find that our students' communication skills improve measurably. A number of our students have won awards for their presentations at research competitions. Finally, involvement in research helps provide students at a commuter, urban, comprehensive university with a sense of community shared with their mentor, fellow laboratory mates, and fellow research participants. The research experience provides an intensive cooperative learning environment as well as a true capstone experience. All of these benefits are contingent upon the fact that the faculty are actively engaged in fundable, state-of-the-art research, and the university recognizes and supports their efforts.

Let me conclude by briefly describing the different kinds of scholarship and assessment of productivity of scholarship. I have defined research as a subset of faculty scholarship. It was done purposely to give scholarship a broader, more capacious meaning as suggested by late Dr Ernest Boyer, former President of the Carnegie foundation. In his book, *Scholarship Reconsidered*, Dr Boyer defined four separate yet overlapping functions of the professorate as 1) scholarship of discovery, 2) scholarship of integration, 3) scholarship of applications and 4)

scholarship of teaching. He argues that research, as we know it, comes closest to scholarship of discovery. But the other three should be acceptable forms of scholarship, and all reflect more realistically the full range of academic and civic mandates. The faculty reward system should incorporate and recognize the contributions faculty make in one or more of this categories. This book should be a must-read for all faculty and administrators involved the evaluation process of faculty rewards. Boyer states that it "...breaks out of the tired old teaching versus research debate and defines, in more creative ways, what it means to be a scholar. It is time to recognize the full range of faculty talent and the great diversity of functions higher education must perform."

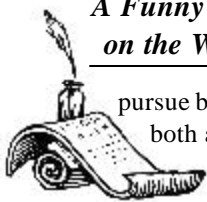
Productivity in scholarship, may it be pure research or any other form, is mea-

sured simply by the degree of acceptance of that scholarship by peers. In scientific research the most accepted measure is the number of publication in refereed journals. An article accepted in a refereed journal has undergone review by its writer's peers; hence a publication is deemed to have passed the test of acceptance by its peers. Publications are needed so that the scholarship can be widely communicated to the community so that others can build upon that scholarship to advance the field. Publication in acceptable and widely read media is then one way to measure productivity in all types of scholarship. Presentations, exhibits, and performances are other ways to measure success. All these have must have one common thread, that they all undergo a peer review process and be accepted by one's peers as worthy of the academe. ■



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A Funny Thing Happened on the Way to the Forum.



pursue both of these together, both agendas are stronger. When we pursue one at the expense of the other, we do a disservice to ourselves as well as to our students.

* * * *

Although my role as editor of the Senate Forum is totally unrelated to my responsibilities in the Faculty Development Center, I am going to take advantage of both positions to pre-announce a major new thrust that we are going to undertake in the FDC. Over the last three years CSUF has made extraordinary progress in the use of the Internet to supplement our regular credit courses. Three years ago we had almost no activity going on in this respect, with the exception of work being done by Mark Shapiro, Jane Hall, and Anil Puri. Today, through the FDC's site licensing and support programs for WebCT, BlackBoard, and FrontPage, we can boast that more than 700 instructors use the Web to one degree or another in over 1,000 courses used by more than 20,000 of our students. This is truly a remarkable accomplishment.

However, not to rest on our laurels, the FDC will soon be undertaking a new Web-based initiative. Starting in the Spring, the FDC will be acquiring new equipment to enable the capture of in-class instruction for subsequent delivery, via streaming audio and video, over the Web. The FDC will be developing procedures, training programs, and grant opportunities for faculty wishing to work with this technology. The FDC's goal in moving in this direction will be to make it very, very easy for instructors to use the Web for video-oriented instruction. This means that you won't have to be a technical guru to become involved. ■

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International Research

on my way from the airport to campus, feeling a bit nervous, being driven to my interview by a future colleague. Along the way he informed me, quite casually, that, "The position is probably yours, if you want it," but that, "You won't like it here." Huh? He then went on to narrate a discouraging tale of budding young research enthusiasm, beaten down and blunted over the years by the combined burden of a high teaching load and an administration that was wholly unresponsive of a scholarly research agenda. It was a story I would hear more than once in later years. Thus, despite a very supportive department chair, the message I received from many of my new colleagues was clear (and stated explicitly) – we are a teaching (i.e. learning) institution; research should be seen as an avocational activity, like jogging. Not very encouraging.

Thirteen years later, I report without reservation, that this pessimistic view is a myth. Research is alive and well at CSUF, and so are opportunities for international work. True, our teaching load is higher than that of "research" institutions, and intramural funding is less than that at UC schools. And, don't we all feel at times as if the best years of our lives are passing before our eyes as we attend to an endless parade of committee meetings? But is the situation really so different at research schools? My sense is that they have their own set of handicaps. For example, advising a couple dozen PhD students can in short order dwarf the time investment associated with a high teaching load. Committee work, I'm guessing, is just as mind numbing at UCLA as it is here. And the anxiety associated with cranking out three or more solid publications per year puts the whole research issue in a different, and rather unpleasant, light. In short, research prospects exist at CSUF for those who choose to pursue them.

I was also told early on that granting agencies were not inclined to favorably view proposals coming from teaching in-

stitutions. This argument may well have some merit, but it simply wasn't my experience. Since arriving at CSUF, with the able assistance of the folks in Grants and Contracts, I've been fortunate enough to receive research grants from the National Science Foundation, the National Endowment for the Humanities, the National Geographic Society, the Fulbright Commission, and numerous others. These have funded nearly two and a half years of fieldwork in Brazil, and another three-plus years of research in Southeast Asia. I make no bones about it. I feel privileged to have been given these opportunities, and at no time have I felt held back by being at a "second tier" university.

The costs of international research can be dear, especially if you have a family. I have packed up my worldly possessions and vacated California so frequently that I feel sometimes like an immigrant. I have become a compulsive box saver. More than once, the people in my department assumed that I was permanently gone. Some, with evident satisfaction, seriously considered advertising my position. After all these years, the number of people on campus that I've yet to meet is impressive. I am still introducing myself. My kids have spent half of their lives in South America or Asia. At one point, they actually lost their ability to speak English, much to the disapproval of their grandmother. And no matter how much money I've received from a grant, it never seems to have been enough to cover the hidden expenses. Last year, for example, while in Brazil for a six-month stay, I was the recipient of a US \$400 "researcher" tax. Conclusion – don't get involved in international research for financial gain.

In spite of these hardships, and they can be significant, the experiential benefits of foreign area work are enormous. It has been the high point of my academic career to date, and I expect it to stay so in the future. A purely anecdotal list of some of these benefits, in no particular order, follows:

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International Research

↑ *Learning from foreign postings* – many of my research trips have included posting and lecturing at universities in Asia and Brazil. I have found these experiences to be illuminating in so many ways. For example, in Brunei Darussalam, each department was required to meet and discuss the contents of course syllabi, assigned readings, and all of our final exam questions. One by one, we challenged each other to demonstrate the value and rigor of each question. Time consuming, but remarkably useful. Grade inflation was rare, as we were required to invite a colleague from another university to review our final exams and marks. Faculty were required to submit a written apology if they planned to miss a faculty meeting. And faculty members were thoroughly reviewed every three years. Failure to publish, to bring in grant money, and to excel at teaching translated in most instances to dismissal. Tough love.

In Brazil, I was asked to serve on several Master's thesis oral exams. These consisted of an audience of perhaps 100 interested viewers, as well as three to five panelists (inquisitors, really). After a 30-40 minute review of his or her research, the student was grilled for 15-30 minutes by each panelist and, in some instances, told that their work did not meet university standards of scholarship. The university was not, needless to say, enrollment driven.

↑ *Research in the classroom* – research and publication are obviously important to the professional growth of university faculty. I never cease to be amazed when I discover that some anonymous researcher out there has been following my work. But one of the most gratifying benefits for me has come from introducing students to my own international research experiences and publications. Realistically, outside of our immigrant and foreign student population, most of our students are not well traveled. For whatever reasons, the possibility of international travel, especially to the developing world, seems beyond the mental and emotional ken of most of our stu-

dents. When I introduce my own experiences in the field, positive and otherwise, students begin to see the "outer world" as a bit less intimidating, a bit less dangerous. And when they see that their faculty are engaged in the kind of work they read about in their texts, I think it enhances the stature of their university experience. Students come to understand that their professors not only convey knowledge, they also contribute to it. That's pretty exciting for many of our students.

↑ *Learning from local people* – my understanding of nature-society relations in the moist tropical realm, once a product of scholarly articles, is now drawn largely from long-term contact with forest people themselves. They are a remarkable source of wisdom. I've had the opportunity to live with the Penan hunter-gatherers, people who still subsist largely by blow-pipe hunting of bearded pigs and forest monkeys. I've danced (badly) with ex-headhunters during their Gawai harvest festival. I was told that my frock of red hair would have been worth considerable in times past. I've prepared magical and spiritual concoctions with Afro-Brazilian healers. And I've spent innumerable hours in the fields and forests learning from aging shamans about their local healing flora.

↑ *Personal enrichment* – Finally, I've dragged my family to most of my research locations, sometimes against their wills. In the end, in spite of the hardships and separation from friends and family, we all feel that our most memorable times together have been in the field. My youngest son remembers being chased into a river in Borneo by a headless chicken, sacrificed moments before in a pre-harvest ceremony. He claims not to have suffered permanent emotional damage. My oldest son still relates our elephant trek into the hills of Thailand to his friends, and the time he caught 15 piranhas in one afternoon. My wife recalls fondly the 4 inch cicada that flew up her skirt, and refused to leave. One of my sharpest recollections comes from interior Borneo, along the border

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Advice for New-Comers

team. We all try to respect and support each other's strengths. Most faculty within KHP participate in research and scholarly endeavors, and several receive assign time to conduct research in our labs. Under Dr. Rikli's leadership, research and scholarly activities are expected, but not at the sacrifice of being an excellent teacher and contributing to professional, campus, and community service.

In addition to support from my College and Division, there are a number of university-wide initiatives that have resulted in the development of a positive and supportive environment for faculty who are interested in research. Several of the initiatives are:

↑ Appointment of a research coordinator within the Faculty Development Center has demonstrated a commitment to helping faculty develop their research agendas.

↑ Provision of a one-course reduction per semester for the first year by the university for all newly hired tenure-track faculty allows the time needed to make a successful transition into the academic arena at CSUF. I understand that some chairs and deans across campus provide an addition year of assign time for new faculty to develop their research agenda.

↑ Provision of resources and workshops provided by the Faculty Development Center to help prepare excellent teachers has allowed faculty to more quickly balance their attention to the other two areas of importance, research and service.

↑ Provision of state-of-the-art computer technology and online supports have helped faculty conduct research more effectively.

↑ Development of the recent services on the Pollak Library's website has made conducting literature reviews for research and journal writing easier. Especially useful is the ability to access abstracts and conduct full-text research sources.

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Advice for New-Comers

↑ Provision of Intramural Grants through the Chancellor's Office and the Foundation support new faculty to help establish their research agendas. With the high teaching loads within most departments, the funding of "assign time" is most valued by faculty to provide the *time* necessary to conduct quality research.

↑ The useful resources from the UAF and the Foundation's Grants and Contracts Office support funding of faculty research. The UAF works with colleges and departments to seek private funds, gifts, and endowments. The CSUF Foundation works with faculty to identify grant resources, and to provide fiscal administration and support services for both grants and contracts. The Foundation also assists faculty by processing the grant proposals through the system, and by providing website services and resources. I have especially appreciated the Foundation's website manual for writing successful proposals.

↑ Institution of the merit system that rewards faculty who are not only outstanding in the area of teaching, but also in the areas of service and research provides an additional incentive to conduct quality research and scholarly activities. I must however acknowledge that the procedures for determining the merit awards are quite controversial, and there appears to be some inequity regarding faculty salaries that has lowered faculty morale regarding the merit system.

↑ The requirement of Developmental Plans and mentors for newly hired faculty that provides a "game plan" and "coach" to help faculty be successful at teaching, research and scholarly activities, and service. Unfortunately, finding effective "coaches" is difficult as more senior faculty retire.

I will now address to what I feel can be done to improve the research environment and support at CSUF. Although sev-

eral of my concerns have already been addressed by the recent initiatives described above, the following will provide a few suggestions:

↑ Provision of supportive staff and additional funds will be needed for Dr. Andy Gill, our new research coordinator, in order to provide the necessary services to facilitate faculty research and publications. I think the highest need is in the area of statistical services, including assistance with statistical methods, data analysis, and data interpretation. Having a few research assistants available for data entry, and having an additional staff person to critique research manuscripts would also be helpful.

↑ Decrease the workload for faculty to allow more time for research and scholarly activities. The University Planning Committee needs to make addressing this problem a priority in order to improve the research environment and support for faculty.

↑ Development and implementation of a University-wide mechanism to facilitate the opportunity for greater interactions among faculty with similar research interests. Such efforts may produce interdisciplinary research projects that have a better chance for funding by foundation and governmental agencies.

↑ Provisions need to be made to recruit and retain quality staff for the CSUF Foundation and the University Advancement Foundation to improve *direct* services for faculty needing research funds, especially for the less assertive ones. Provisions also need to be made to help faculty understand the distinct roles between the two foundations.

In summary, I feel that although CSUF has recently initiated several strategies to help improve the research and scholarly activity environment and support at CSUF, there are still many internal and external "challenges" to overcome. I believe that the perception and attitude of each faculty member about the area of

research and scholarly activities ultimately decide whether he/she is successful.

I would like to share eight lessons I've learned that have made it easier for me to be a successful researcher and faculty member.

1. Research that addresses a need within the community is more likely to be funded.
2. Earning tenure and promotions is easier if you also tie research to community partnerships, student learning, and professional service.
3. Sensibly paced, continuous efforts generally result in greater productivity than "off-again, on-again" strategies.
4. Teaming up with someone who complements your research skills can be very supportive in finishing research projects.
5. Complete all the steps necessary to get to the writing stage of a manuscript before a semester break so you have time in which to write.
6. Focus your research and scholarly activities on what you "love" to do. As John Ruskin stated so eloquently, "When love and skill work together, expect a masterpiece."
7. Maintaining personal and professional integrity through the tenure and promotion process can be challenging at times. Integrity involves among other things, being morally and ethically strong, carrying oneself with pride and respect, doing things for the "right" reasons, following through with commitments, preserving the dignity of others, and helping to develop and/or keep a friendly work environment (avoiding gossip, defusing bigotry, de-escalating conflict, minimizing complaints).
8. Finally, I would be remiss if I did not add—success as a faculty member is more easily facilitated if you balance your research and scholarly activities with a little *physical activity*. ■

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What Do We Want to Accomplish?

Is there a “Senate perspective”?

The Academic Senate Executive Committee talked about a “Senate perspective” on research when I asked for help with this essay. What do we, as a Senate, think the role of research on campus may be? The Executive Committee came to a consensus fairly quickly (though I can’t guarantee that we represent the full Senate, I suspect on this issue we do). In an ideal world, the Executive Committee agreed that our research should stress these elements:

- ↑ Scholarly activities that allow students and faculty to work together;
- ↑ Research that examines issues of concern to community needs;
- ↑ Research that adds to the scholarship of learning.

Several members of the Executive felt strongly that classroom-based research should not be “penalized” in the evaluation process. All agreed that the pressure to produce publishable research stems from the faculty, not “the administration.” In short, we sympathize and support our junior faculty who feel enormous pressure to publish, but in fact, we are the ones who are making junior faculty live up to a standard that some of us did not, or could not meet.

We also agreed that the research “culture” differs across the campus, depending in large part on the history of individual colleges. Some of the culture emphasizes faculty-student collaboration. This is particularly obvious in those places where faculty have obtained external grants that provide support for student research assistants, and that culture is as dependent on the availability of funding as much as it is on individual faculty initiative. The CSU, on the whole, does not have the support advantage found in first-tier research institutions when it comes to competitive grants. Nevertheless, it is true that funding resources are richer in the sciences than in the humanities, and that is also reflected in the support available for faculty-student collaborative efforts. And once established, that culture can thrive. Check the funding given to stu-

dent research by the Departmental Associations Council: the vast majority of applications—and ensuing support—are in the College of Natural Sciences and Mathematics.

The classroom-student-collaboration link

Is this faculty-student research collaboration a norm on our campus? In other words, are my Senate colleagues correct in thinking that we fulfill our mission best when we engage in research with students, research that supports classroom learning? Is this what we value? Certainly, the Senate’s published statements support that approach. UPS 210 (in conformity with the collective bargaining agreement) does not say that research is the most important of the three retention, tenure and promotion criteria; in fact, if anything, UPS 210 can be interpreted to read that the criterion of teaching is the most important part of the RTP process. What UPS 210 does do is leave the implementation of the research criterion to individual departments, acknowledging the different cultures that characterize our campus.

On the whole, faculty fear that we will be seen as embracing mediocrity if we do not value published research (or juried performances) more highly than our competitors. Which of the following outcomes is going to be more highly prized on our campus?

Scenario one: Junior Faculty Member (JFM) contacts a former mentor, who happens to have an NSF grant. The research isn’t directly related to our JFM’s current scholarly interests or teaching assignments, but it is productive research and all research contributes either directly or indirectly to teaching effectiveness—isn’t that what we claim? JFM gets a couple of peer-reviewed articles published in decent journals in the field.

Scenario two: JFM-2 reads an article in the *Orange County Register* about a worthy community project that is closing because of lack of resources. JFM-2 con-

structs a research project, and a classroom of students descends on the community, interviews dozens of former clients who benefited from the project, collects data about community needs that are met by the project, and produces a position paper that is delivered to a local government authority. Maybe the authority reconsiders its decision to shut down the project; maybe it doesn’t. Since this is fiction anyway, let’s say the authority decides to continue the project based on the analysis that JFM-2 and CSUF students have compiled. JFM-2 writes a witty essay about the experience and it is published in *The New Yorker*, where it is read by a whole lot of people.

Using the usual standards of most department personnel guidelines, our first JFM has produced research that “counts” while JFM-2 probably has not. There is the “position paper” which JFM-2 may present successfully as research. But it hasn’t been peer-reviewed. The *New Yorker* article, arguably a more difficult publishing venue, isn’t a scholarly journal. Most personnel documents will count JFM-2’s activities as an important teaching contribution and valuable community service, but still require the traditional research outputs before granting tenure.

Do we need new models?

One undisputed conclusion we can draw about the role of research is that senior faculty, the ones who make the decisions about which junior colleagues have a future on this campus, make the research rules. If one of the goals of our campus is to get ourselves on the annual rankings list published by *U.S. News and World Report*, or onto other “The Top 10 Best of...” lists, our agenda is clear. We have to get more external funding that results in peer-reviewed publications in preeminent journals so that those surveyed for these reputational rankings acknowledge our scholarly prowess. That way, the theory goes, we will be able to attract the best new faculty and students. (Don’t ask me what role salary plays here; maybe the attractiveness of Southern California is sufficient compensation.)

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Research, Merit Pay and the Coach

grew to monstrous proportions with college presidents and alumni believing that successful football programs legitimized their institutions as major “big time” universities. Coaches and administrators started to feel the pressure of winning at all costs and began realizing that the security of their employment was directly linked to their success on the field or court. But while winning became the central focus, educators in the intercollegiate athletic profession clung tenaciously to the belief that an athletic experience for the student athlete in colleges and universities had more far reaching educational benefits.

It was thought that the development of qualities such as discipline, perseverance, collaboration, and sportsmanship—inherent in the intercollegiate athletic experience—supplemented and supported the University’s mission. The “out of class” experiences valued in today’s institutions provided the opportunity for athletics to further legitimize itself. Unfortunately, many athletic coaches and administrators today do not fully understand the importance of the need to constantly justify their place in higher education. They have become complacent in their roles and have ignored the warning signs along the way. As a consequence, abuses, rules violations, NCAA sanctions, and other kinds of notoriety have become the rule rather than the exception.

Into this milieu of controversy and confusion as to the legitimacy of athletics in higher education enters the coach, the personification of sport itself in academia. Where does this professional belong? Can she or he really be considered faculty members? Further, how can a university best embrace coaches as educators, while at the same attempting to grapple with the issue of whether or not athletics, in fact, belongs in the formal educational system?

Coaches are classified in many different ways in America’s colleges and universities. Some are considered staff and given staff privileges while others are

classified as faculty and, in fact, are expected to teach classes in the Physical Education curriculum. But in most institutional environments, especially in NCAA Division I institutions, few are tenured or given tenure track assignments. This is the case at Cal State Fullerton. Even though coaches are in the faculty bargaining unit (Unit 3), they are considered temporary employees, do not have tenure or tenure potential, and, for the most part, are given one-year contracts. On our campus, their contracts are analogous to the lecturers’ as far as job security is concerned. Yet, the Faculty Merit Increase (FMI) process is not changed or altered for coaches and they, like all faculty, must show merit in research and scholarly activity, teaching, and community service.

In order to find consistency in the merit increase process for the coach, it is necessary, first of all, to recognize and accept the legitimacy of athletics in colleges and universities, and secondly, to adapt the merit increase process to fit the demands placed on coaches. Without this acceptance, the current system makes little sense for coaches. But while the inconsistency of the system may prevail, it is important to note that merit pay is what most coaches accept as the expected way to receive salary increases. Unlike many faculty members, tenured ones mostly, coaches recognize and acknowledge that salary rewards should be the result of obvious accomplishments and should not be given to everyone. Just as in sport itself, everyone does not win or receive recognition—only those who excel beyond what is expected receive the highest rewards.

While faculty members’ retention, promotion, and tenure (RTP) as well as the FMI process are based on accomplishments in 1) research and scholarly activity, 2) teaching, and 3) community service, the coaches’ evaluation is based on success, clearly evident, in other categories. Yet, merit pay for everyone in Unit 3 on our campus is judged by merit dem-

onstrated in the three categories delineated above. Outside of the FMI process, all coaches in the Department of Intercollegiate Athletics are evaluated annually based on their teams’ success demonstrated in the following categories: 1) academics, 2) wins, 3) NCAA compliance, 4) fund raising, 5) administrative compliance, and 6) community outreach.

The dilemma then becomes obvious: how do the coach and the FMI process find compatibility? Research and scholarly activity is not expected of coaches. Yet, coaches are required to compete for the same merit dollars, as are those who do have to fulfill this requirement. While the process allows for merit in less than all three

FMI categories, coaches, like the lecturers on campus, are at a disadvantage in the competition for this money. Every activity in which a coach engages professionally should lead to results that are clearly visible to anyone who cares to observe. These results include team success (wins), success in graduation rates and GPAs (how many faculty members are required to have their students’ grades published and submitted to the national government as required by the EADA [Equity in Athletics Disclosure Act]), success on the court and field (indicating the coach’s ability to recruit and teach), success with NCAA rules and regulations (visible via the media when not compliant), success in fund raising (indicating the coaches’ ability to generate financial support for their own programs), and success in touching the community with the message of the place and the importance of athletics’ role in earning the public’s trust.

Yet, given the differences in accountability, coaches must find a way to integrate what is required of them into the current FMI process in order to compete for salary increases. The issue is not, and has not been, merit pay itself since coaches are used to being rewarded based on their measured accomplishments. Rather, the issue is how to adapt the process so that

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Research, Merit Pay and the Coach

coaches are placed on a level playing field with all other faculty. While the rewards for faculty include both merit salary increases and RTP, the reward for the coach is a merit increase along with the commitment of merely one more year of employment.

College and university athletics are certainly the largest and clearest window through which the public views any university. Coaches are instrumental in opening that window and keeping it spotless.

Coaches are the key to true athletic reform. Their actions can greatly damage the integrity and image of an institution. Their attitudes greatly affect student-athlete welfare. Their position as a highly visible representative of the University provides unique imaging opportunities for higher education as it struggles to communicate its story more effectively to the public.

John R. Grady,
The Successful College Athletic Program,
1997, p. 108.

Titan Athletics is committed to the educator-coach concept. While the degree of success on and off the field is not always what fans and administrators hope for, the student athletes graduating from Cal State Fullerton are great ambassadors for this institution and for the learning that takes place here. The accountability for the ongoing success and caliber of our student athletes rests almost entirely with the coach. As with the faculty, this responsibility is great and the results are rewarding. Recognition by the University in the form of merit salary increases through a fair and appropriate process is the ultimate reward for the coach who has shown outstanding merit. Adapting our current FMI process to match the evaluative criteria set for coaches in their annual reviews would be one more way to show acceptance for the role of athletics in higher education. ■

(Continued from page 4)

Needed: A Better Research Environment for Untenured Faculty

member's research activity is the number of journal papers published. In many cases, there is only one criterion for an untenured faculty member to consider when choosing a project: can it lead to journal publication? In this environment, many important tasks are ignored simply because they cannot lead to publication. When joining CSUF in 1998, I planned to commit myself to create an Internet teaching lab. This is a task that requires a lot of time and effort, and it could benefit our students greatly. I believe it would make our department a leader in IT education among all Cal State campuses. Clearly, this will not lead to any research papers anytime soon. To meet the tenure and promotion requirements, I have to devote more effort to research projects that will produce papers; as a result, the lab is still not in place today.

I strongly believe that changes can be made to improve the research environment at CSUF for untenured faculty. Here are a few suggestions:

↑ Provide better support for new faculty in their first year. For example, give them more release time and create a summer support program for untenured faculty.

↑ Encourage faculty to attend research conferences to present their work.

↑ Improve the evaluation standard. A person's research should not be judged only by the number of journal papers; other scholarly activities should also be considered.

↑ Encourage faculty to seek funding from local industry. This often leads to research projects that can attract more student participation.

↑ Allow faculty to give more input in choosing books and journals for the university library.

↑ Improve the personnel review process so that it is not just bean counting. Efforts should be made so that peers who are experts in the field evaluate the quality of a faculty member's work.

↑ Encourage collaboration among faculty in the same department or different departments by creating a funding program to support such efforts.

It is for the good of our university to create an environment so that new faculty can be successful in their professional development. It is an investment that will benefit our students and help to achieve the university mission. ■



(Continued from page 1)

A Word from the Faculty Coordinator

in attendance were appalled by such a “shallow” response. They, no doubt, had been under the impression that I wanted to save social security, end poverty, reform the welfare system, and end racial and gender inequities in the labor market. I was a bit surprised, too, since I knew that I had responded truthfully. Was this the extent of my burning intellectual curiosity? Would this become part of my WPAF (Portfolio: UPS 210.000)?

I would like to think that I’ve matured since then, and I suppose that I have. My research agenda has been very focused and firmly grounded in important public policy issues. I have written about immigration, race, and gender issues in the labor market, the impact of illicit drug use on labor market performance, and most recently, the role of community colleges in providing important job skills and training. But part of me still loves research for all the wrong reasons. I enjoy the work because I like to seek answers to questions, any questions. I enjoy discovering how scholars in other disciplines approach questions that are of interest to them. I enjoy the process of putting together a well-crafted research project. In my discipline this commonly involves a consideration of the research strategy, the review of the literature, the theory, the empirical model, the appropriate statistics, and then combining it in a way that someone will find interesting and informative. And yes, I enjoy working with the data, any data.

This somewhat omnivorous approach to research led me to the position of Faculty Coordinator for Research and Creative Activities. What’s in it for me? I get to learn about the wide variety of research and creative activities happening on campus, and talk to faculty about how they do research in their specific disciplines. I get to showcase that research, and better yet, I may get to contribute in some way to the final product. I get to discuss research design, modeling, sta-

tistics, and data with well-trained experts in fields that are not my own, and I learn about creative activities that don’t necessarily lead to publication, but are integral to the professional growth of the faculty who engage in them and to the mission of the university. It appears that the legendary kid in the candy store has been unleashed.

I am pleased, humbled, and very enthusiastic about taking on the position of Coordinator for Faculty Research and Creative Activities. My charge, as articulated by Vice President Smith, is to identify, develop, and implement a campus wide, comprehensive program for faculty to support scholarly and creative activities. My vision for accomplishing this task is necessarily shaped by my own expertise and experience. I realize that one person, a social scientist for example, cannot be everything to everybody on campus. I also believe, however, that there are a number of interesting things one can do that transcend field of study, and will assist faculty campus wide. Quality research and creative activities are facilitated by a stimulating environment, available time to complete tasks, and specialized skills. Younger colleagues and recent graduates may also benefit from the advice provided by a mentor. I believe I can provide valuable advice on submitting and revising manuscripts for publication, time management, and establishing and maintaining a research agenda.

I am delighted to report that a great deal of progress is already being made. Based on your responses to my Research and Creative Activities Survey, a campus-wide poster session is being organized for late February or early March. I have started work on establishing a statistical and software consulting center and a center to assist faculty with writing and editing manuscripts. Pilot programs in these areas may be implemented as soon as next semester. I plan to seek additional funding to support these and other programs in the form of Mission and Goals Initiatives and grants. I also plan to support and extend existing programs already in place at the Faculty Develop-

ment Center. These include the interdisciplinary faculty writing/publication support groups, the statistics and software workshops, the research design workshops, and the publication of existing brown-bag seminars on research taking place in each college. Future plans include a centralized working paper series to disseminate faculty research outside the university, university seminars and public lectures, and a database of software experts. Helping younger researchers establish research records so they are competitive for grants is an important goal, as well as finding creative ways to free up faculty time to write grant proposals. As has already been the case, your suggestions will help to shape the direction of the coordinator position.

My first task as coordinator was to solicit contributions to this issue of the Senate Forum. Contributors were asked to speak to the role of research and creative activities on campus, to be candid about their experiences here at CSUF, and to provide advice for junior faculty. As you will see, we have very talented colleagues that are dedicated to their role as scholars. I hope you enjoy hearing about the wide variety of research and creative activities taking place on campus as much as I have enjoyed putting it all together.

I have been very fortunate to have wonderful colleagues that have helped me with my research activities over the past 16 years. I will continue to pursue an active research agenda, but I also look forward to having the opportunity to assist others in their research endeavors. ■



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The Importance of Research and Grant Support

first presidents of Cal State Fullerton (William Langsdorf and then Don Shields) as well as other key figures, like Miles McCarthy and Andrew Montana, which created this university “culture” from the beginning and then maintained it. President Jewel Plummer Cobb and others that followed gave further emphasis on research and scholarship.

Juggling research and teaching

It is not easy to juggle cutting edge research/scholarship with the demand for excellent and extensive teaching required of our faculty (not to mention the many other demands of committee work, advising, and so on that are needed). One of the key factors for me has been to view research not as something to be done on top of teaching and other required activities, but to acknowledge, assume, insist and act upon its equal importance to teaching. Both teaching and research/scholarly activity are potentially bottomless time sinks. [To a lesser extent this is also true of committee work.] Faced with the fact that there is always more one can do in preparation for a given course or class, or in grant writing, research and scholarship, and yet there are only so many hours in a day and week and month available for all one would like to do, one must decide just how much time one can and must devote to each of these activities. Obviously, in a given week one may have to work harder on one than the other. But in the end it must balance out, otherwise, it is my feeling that one will not succeed in both teaching and scholarly/creative activities. Personally, I have found that, just as it is necessary each week to set aside time to prepare for and teach classes, grade assignments, etc., it is necessary to set aside time for research and scholarly activity. Certain hours every week should be set aside for data gathering and analysis, in whatever form this occurs in one’s discipline. In my case this means carrying out laboratory experiments with students and meeting with them (or alone) to analyze the results, reading the relevant literature (to compare those results with those of others),

and so on. In addition, time must be set aside for writing and thinking. I almost always spend one day a week at home, analyzing and writing up research findings for publications, writing grant applications, reviews, etc.

Campus support system for obtaining grants

In virtually all disciplines, obtaining grants in support of research and scholarship is helpful. In some, like the physical and biological sciences, it is essential, as data collection is expensive and requires materials, instrumentation, and the support of individuals (in our case primarily for the professor and her/his students) to carry out the studies devised and gather the research data. Over the years, the university established an excellent support program to help faculty obtain grants in support of their research as well as teaching activities. The office of Grants and Contracts in McCarthy Hall 112 is the central hub of this program. Under the direction of Dr. Stuart Ross, the office and program is supported not only by the university but by the California State University Fullerton, Foundation, which was founded to deal with contracts and grants as well as with merchandizing and other commercial activities (bookstore, food, etc) on the campus. The success of the program has fed (and continues to feed) its own growth. The more successful faculty are at obtaining grants and contracts, the more support personnel have become available to help faculty prepare grant applications and administer the incoming funds. In the last five years alone, funded grants and contracts obtained by faculty have risen to over \$11 million per year.

Since the time of President Cobb, funds have also been made increasingly available each year by the university (in part from funds obtained by the Foundation) through its intramural grant program (Faculty Minigrants). This has been a particularly important source of “seed money” to begin new research projects, in that most granting agencies and review

committees look for preliminary evidence of feasibility, and evidence of the correctness of a hypothesis being tested, in evaluating a funding application. [Indeed, in the biomedical sciences, one often has the feeling that most of the work must already have been completed before funding is likely to be provided.] Additional and highly welcome support for faculty presentations at national and international research conferences has also been made available (Travel Support Grants), and for a long time there have been limited funds to help with the costs of publishing research articles (\$250 per article for page charges; \$150 per article for reprints) (also available through the Office of Grants and Contracts). The more recent institutions of a campus Research Coordinator (Professor Andrew Gill) and the Faculty Development Center (under Professor Ellen Junn) are hopeful signs indicating that support for research by faculty continues and may be growing.

Appropriate boards and committees necessary for overseeing specialized aspects of research, such as that involving studies with human subjects (the Institutional Review Board), hazardous materials or instruments, radioisotopes, or animals, have been in place for most of the history of the university, and have kept pace with regulatory requirements that have increased dramatically over the last two decades. Similarly, appropriate and excellent training and monitoring programs for use of hazardous materials and instruments have been in place for a long time, again keeping up with the changing regulations involved. Perhaps surprisingly to some, the use of hazardous materials is not confined to the “hard sciences,” but can also occur in connection with the arts.

Involving students in research

There is, thus no reason for faculty not to pursue research and scholarly activity and, even apart from the requirement for tenure, there is every reason why they

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The Importance of Research and Grant Support

should in order to be productive, successful and satisfied academicians. The university has by now established an excellent support system for initiating applications for research (and teaching) grants. For each discipline there are appropriate federally funded and private granting agencies to which one can apply, and the Office of Grants and Contracts can help a faculty member identify the ones of interest. Funds are available, not only for the faculty member, alone to carry out the work, but to employ student assistants in the process. This is an invaluable experience for our students – to involve them in scholarship and research, while at the same time, it provides the faculty member with a means to gather more data than he/she could possibly gather alone. The excitement, value, and career importance of involving undergraduate and graduate students in research has been a particular focus of the College of Natural Science and Mathematics. My own department (Chemistry and Biochemistry), for example, has for decades required research experience for the bachelor's degree, and has been able to compete with PhD granting universities for National Science Foundation summer research funds in support of undergraduate students. With Biological Science and some other departments, a substantial and elaborate support system for student research [including especially underrepresented (minority) students] has

been established, and funded by several different federal and private agencies. These programs have given Cal State Fullerton major recognition as a model of how to involve undergraduates in research. I think it would be wonderful to see this become a general theme at the university, involving all of its colleges. (Indeed, some of that is already in place.)

In addition to involving students in research, grants can be obtained to fund non student personnel who may be critical in providing some of the support needed by a faculty member to accomplish her/his research objectives. In applying for funding, I think it is important that a faculty member be realistic about the personnel needed to accomplish the goals described. There may be the temptation to scrimp on asking for funds for extra people who would make a real difference, perhaps with the notion that asking for less will give you a better chance at funding. Although the latter is sometimes true, it mostly is not. Either way, it seems more important to make a true and realistic assessment of what are the needs for personnel, and their cost. The panels that review for granting agencies (I have been on many) do take this into consideration in terms of whether they believe something is truly feasible. Moreover, if you cannot "deliver" what you promised, this will be held against you the next time. ■

THE SENATE FORUM

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What Do We Want to Accomplish?

Or, senior faculty can take our learning mission seriously and place greater value on research and creative activity that shares the generation of new knowledge with our own students and perhaps finds alternative outlets from professional journals. Which do we value more? Esoterica that is read by hundreds, writ-

ten in a vocabulary that excludes all but our own peers? Or classrooms that are enlivened by research collaboration that may or may not pass peer review muster? We will probably stick to the safer, known hurdles over which our junior colleagues must jump. But it might be significant if we consider a few alternatives. ■

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The Role of the Library

faculty across the disciplines. Following the retrenchment of the early 1990's, libraries in the CSU System have recently experienced improved levels of fiscal support, thereby stemming the tide of declining purchasing power. In addition, we have witnessed a marked advance in our ability to use technology to make information resources more accessible. Recouping past losses is a more difficult—if not impossible—task, prompting our library instead to focus upon creative and forward-looking approaches to meeting current and future information needs.



Facilitated by the addition of a new building and upgraded technological infrastructure in the late 1990's, the Pollak Library has taken aggressive steps in embracing new information technologies in the provision of its collections and services. These newer electronic approaches, when combined with traditional means, have significantly strengthened our ability to support scholarly and creative activities. Below are outlined a number of specific examples of what faculty can expect from our library:

CSUF's Collections and Services

↑ Current collections of materials number nearly 3 million items, including books, journals, electronic resources, microforms, government publications, audiovisual materials, and computer software.

↑ The comprehensive Pollak Library Home Page ("<http://www.library.fullerton.edu/>" <http://www.library.fullerton.edu/>) serves as a launch point for access to virtually all Library collections and services, and contains numerous direct links to other relevant pages or Internet sites.

↑ A special "Library Guide for Faculty" page (<http://www.library.fullerton.edu/facultyguide.htm>) pulls together elements of particular interest to faculty, including online access to information about document delivery, copyright, etc.

↑ Library faculty possess expertise in a wide range of subject disciplines. This is essential in developing the Library's col-

lections and in providing specialized assistance to faculty in their scholarly and creative pursuits; they develop subject-specific Web pages which identify key library resources and Internet sites of value in conducting research; and they seek out appropriate opportunities to collaborate with other discipline faculty in grant proposals and projects of mutual interest, such as the promotion of information competence.

↑ Approximately 100 electronic databases (citation and/or full-text), in a broad range of subjects, are available within the Library as well as remotely from a faculty member's office, classroom, or home computer.

↑ Nearly 1,000 full-text online journals are currently included in the Library's collections, and that number is expected to double within the coming year.

↑ Books are circulated to faculty on semester-long loans, with the option of online renewal for subsequent semesters. When needed, print issues of periodicals are circulated for 24 hours to faculty.

↑ Remote access to the Library's online catalog and electronic resources can be gained through the Titan Internet Access service (provided without charge to CSUF faculty). Beginning in January 2001, access via any other Internet provider can be supported by the Library's proxy server; this option may work especially well for those with cable and DSL access and/or those who may be conducting research in locations outside the Titan Internet Access service area.

Access to information resources beyond those available at CSUF

↑ Reciprocal use agreements allow CSUF faculty to conduct research in and borrow materials directly from all CSU Libraries, as well as from other regional libraries such as UC Irvine, UC Riverside, UCLA, and the Honnold Library of the Claremont Colleges.

↑ Through the LINK+ service, books from many CSU Libraries and a number of private academic libraries—including Honnold and the University of Santa Clara—many be requested electronically through our catalog. When you search for an item in the catalog that is not in our collection, you are given the online option to check for holdings in other LINK+ libraries and, if available, the item will be sent automatically to Fullerton for your use.

↑ Beginning in Fall 2001, the Pharos "gateway" online system will bring even greater opportunities for resource sharing among CSU libraries, initially by allowing direct user-initiated borrowing of books from all 23 campuses, and eventually by offering similar service for articles, together with potential for campus customization of many additional features.

↑ The Library supports the CARL UnCover document delivery service which allows faculty to have journal articles from approximately 18,000 titles (not owned by CSUF) faxed directly to them within an average of 24 hours. This service has recently been extended to all graduate students and, in Spring 2001, we will experiment with UnCover for some undergraduates on a limited basis.

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The Role of the Library

↑ Our Interlibrary Loan service will obtain books or articles not owned by CSUF from libraries across the nation, and even internationally. Requests can be submitted electronically, using the Library's Web page. Expedited service from all CSU Libraries and several University of California libraries assures rapid turnaround on most requests, which are delivered to faculty offices daily upon receipt. In cases where journal articles are transmitted electronically to us, they will be forwarded to faculty for retrieval from their desktop computers.

Issues and Challenges

While the Pollak Library is proud of its record in supporting the University's academic programs, we are constantly striving to explore and adopt enhancements to our current array of collections and services. However, the inexorable press of enrollment growth in recent years challenges our capacity to provide quality collections and services to a rapidly increasing community of users. Likewise, we are challenged by the demands of a multifaceted curriculum and a highly motivated faculty. In evaluating alternatives, the input of the Academic Senate Library Committee and other individual faculty is vital as well as welcome.

While the conversion to electronic media for many information resources has enhanced access, the cost of online materials is often higher than for comparable print versions. To maximize our fiscal resources, we participate in a growing number of consortial purchases, leveraging the collective purchasing power of the CSU by engaging in systemwide acquisition or licensing of materials. This consortial approach has proved highly advantageous and has allowed us to stretch significantly the purchasing power of our finite budget. In addition, we have benefited from systemwide initiatives to restore some of the estimated \$12.1 million of purchasing power lost since 1990. In 1998/99, \$10 million in one-time funds were allocated to CSU libraries for this purpose; with CSUF's share of these

funds (\$370,500), we began to address deficiencies in our book collections and other materials, with particular focus on support of areas where new faculty and curriculum had been added in the last decade. In 2000/01, \$3 million in baseline monies were provided systemwide to support electronic resources, including an exciting new consortial program focusing on 1500 e-book titles that will be selected and shared systemwide.

In recent years, the campus has allocated funding to cover the average annual 10% inflation rate in materials prices. With the coming budget request cycle, the Library will be seeking means to address new or previously unmet needs, e.g., information resources to serve the University's increasing number of distance education programs and the anticipated State-supported summer-session; collections of materials to support strong scholarly and research interests of faculty; and new Library faculty and staff positions to sustain the Pollak Library's essential services, including those which facilitate the instructional and research needs of faculty. Without the infusion of additional funds, we can only continue to make budget and operational decisions based on the most efficient use of existing resources. In terms of the collections, this involves careful examination of costs for particular items from a variety of vendors as well as analysis of use patterns of existing materials to determine whether onsite or document delivery provision is most cost effective. It might be well to note that Fullerton's record in providing interlibrary loan and document delivery services is one of the strongest in the CSU System.

In the past, it has occasionally been suggested that the Library should share directly in the overhead costs of grants awarded to the university and/or that individual faculty members should write into grant proposals an appropriate element of Library support for the research effort being undertaken. While such funds would naturally allow us to pro-

vide additional resources, we are mindful in an environment of limited resources, that there are many competing needs. If there are ways in which we can collaborate with faculty in the process of estimating the impact of research proposals and grants on the Library, we are eager to participate in such efforts.

An issue larger than Pollak Library or even than libraries in general is the increasing cost and complexity of the scholarly communication process. This situation has prompted several national and even international efforts among academic institutions to reclaim much of the responsibility for publication activities, many of these relying heavily on new information technologies. An example of such an effort is The Scholarly Publishing and Academic Resources Coalition (SPARC) which is a worldwide alliance of research institutions, libraries and organizations that encourages competition in the scholarly communications market. Universities as well as scholarly societies have promoted a variety of new models of electronic publication that reduce costs, while preserving high quality through the peer review process. The Open Archives Initiative is another example of a program to facilitate efficient dissemination of content within the scholarly community. Faculty play an important part in the encouragement (and ultimate success or failure) of alternatives to the traditional journal model, in that they serve on editorial boards and are the primary contributors as well as consumers of this "product."

In looking to the future, the Pollak Library faculty and staff are enthusiastic about the prospect of continuing to work closely with individual faculty and groups to enhance CSUF's already impressive array of scholarly and creative activities. Integral to this process is collaboration with all academic departments and programs, the Academic Senate and its committees, and the Faculty Development Center. ■

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Managing for Research

As I can tell these questions have been addressed primarily by chairs and deans who mostly try to fill gaps in their disciplinary coverage while acknowledging the limits of resources and facilities, with little support or guidance from the campus. The current system is *laissez-faire* and *ad hoc*: convince any administrator and you'll get partial funding; get an outside grant and the campus will let you start; don't ask for too much and the campus won't bother you. This system does assure that only persuasive workaholics will survive, and it does keep the campus open to new opportunities, but at a high cost in frustration, confusion, and insufficiency.

Setting campus priorities is fraught with difficulties, but so is failing to do so.

Relating to Sponsors

Support for research comes in a dizzying multitude of ways — as gifts, grants, or contracts from Federal agencies, individuals, industrial firms, private foundations, beginning entrepreneurs, national nonprofit groups, or local social service agencies. Soliciting a gift for the arts, for example, presents quite different problems of paperwork, personalities, and accounting than does negotiating a contract with an aerospace firm; and processing a standard proposal to the Department of Education is different from both.

The management problem the university faces is how to address that external variety — assisting faculty with the transactions, maintaining responsiveness to the sponsor, and complying with applicable regulations. For research as well as other university activities, proactive brokering makes a difference, but it takes considerable time and effort. There are a few basic distinctions to consider, although each has variations and shadings.

The distinction between public sources of funding and private sources is important, because the two usually behave differently in supporting research. Another important factor is what the sponsor

wants in return — just a thank you note and a news article, or perhaps also a report, a service, a financial interest? An “exchange relationship,” as auditors call it, can occur with either private or public sources. It requires close management, to ensure that the university is meeting its obligations and receiving its due, and to ensure that the exchange is recognized as such. Contracts, the most explicit form of exchange relationships, may derive from public or private sources and hence may be set in a very structured or very personalized context. CSUF has about 50 contracts for faculty projects at present; in 1989-90 it had only 25.

CSUF and other CSU campuses, still growing in the world of grants and contracts and recently thrust into the world of advancement, have not settled on how to organize around these issues. To facilitate future progress, they do need to be resolved. The more personalized nature of transactions with private funding sources requires different skills than does the more structured nature of transactions with public sponsors, and so at most universities the coincident distinctions of skills and audience lead to the establishment of separate advancement offices and grants offices. At CSUF and elsewhere, each contributes in its way to the support of research. However, both public and private sponsors can establish exchange relationships of many kinds. Either both offices must be equipped to shoulder those responsibilities, or one office must take them on and someone must be authorized to route the workflow accordingly. Often the grants office is better equipped to handle those responsibilities because it is already engaged in the multiple approval processes for public regulations and public accounts, but advancement offices should be no stranger to legal agreements. Larger universities often also have a separate staff for contracts, public or private.

Regulations and Responsibility

The Federal government, professional associations, and the State government have promulgated many regulations and guidelines that apply to funded research and research in general. In virtually ev-

ery case, legal responsibility for enforcement is placed on the campus. This fact puts the campus into an enforcement mode with its researchers — preferably accompanied by an assistance mode. The regulations include conflict of interest, lobbying, research ethics, mistreatment of animals, radiation safety, mistreatment of human subjects, as well as those that apply to research as well as to other campus activities, such as environmental regulations, safety regulations, and labor standards. Many of the regulations on research apply whether the sponsor is public or private; some apply specifically to private sponsors.

The resulting management job for a campus is substantial. For a university to do any research at all in a regulated category usually means engaging the entire required apparatus of committees, policies, and paperwork. Clerical effort is needed for the many forms and permits, and databases for tracking them are also required; faculty time and administrative time are needed for devising suitable procedures and reviewing protocols. Procedures and staff time are needed at a prior step as well, monitoring the stream of research projects and proposals to be sure the necessary reviews or renewals are initiated. Each transaction can take a few minutes, or many hours. Many of the regulations and standards give the campus discretion in applying general principles to specific instances, with some guidance from the interpretations of agency officials. The situation is difficult for the regulatory committee and may be maddening for the researcher, but it cannot be avoided.

The regulatory structure in place to support research at CSUF resembles that of many other campuses, although the particulars of procedure and policy vary. There are separate committees to review proposals for the use of human subjects and proposals for the use of animals. Another committee reviews potential conflicts of interest. Each of the committees requires staff support to manage the required paperwork and provide assistance to faculty. The grants office re-

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Managing for Research

quires the principal investigator of every proposal to sign a form acknowledging other regulations on such topics as lobbying, drug use, and research misconduct. In the Administrative Affairs division, the radiation safety officer and the chemical hygiene officer maintain the university's radiation license, ensure compliance with dozens of regulations concerning chemicals and biological materials, and conduct training sessions in those areas.

The consequences of not complying with the regulations range from troublesome

to severe: special inspections, fines, suspension of particular research activities, and loss of federal funding for research — depending on the severity of the problems and the university's attitude towards fixing them. Calibrating and holding one's position on that slope is not easy and not productive; it's best to be conservative.

If the intent of compliance is merely to avoid horrendous incidents, then we have been successful. But triage is not really an option any more than some kind of "Regulation Lite." Those approaches leave us open to Federal penalties; they leave us open to the potential for real misbehavior. More importantly, such

half-hearted approaches would create the image and the reality of CSUF as a place where professionalism in research is not taken seriously. We should not be stimulating more research without also providing concomitant support and coordination to the required regulatory staff and processes. Providing orientation and assistance, not just enforcement, is clearly an important requirement.

Yes, the regulatory zeal sometimes gets excessive in Washington and on university campuses, and of course an initial resistance to regulation is understandable. After all, the regulations emerged only because of a few bad incidents, although most research has been properly handled. As individual citizens we can argue about the need for the regulations in the political arena, and universities take part in the political process too. We can also argue here on campus over interpretations and degrees within the regulations. But it is not useful or legal to ignore the regulations once they are imposed; it is inappropriate to blame campus personnel for regulations they did not invent, and it is naïve to pretend that research is inherently pure or that bad research won't happen here.

* * * *

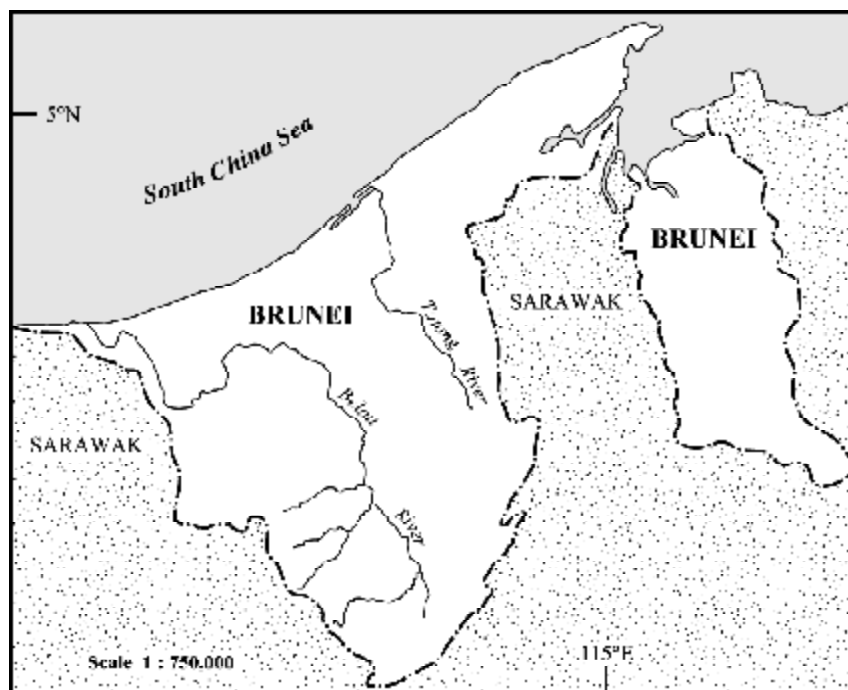
Some observers think it obvious that if the campus had less management and regulatory machinery, then the university could charge less for research and do it faster, thereby getting more business. After all, this line of thinking goes, setting priorities, relating to sponsors, and complying with regulations are not really part of the research. By this logic, car companies should skip adding safety features or radios, and football players would do better without coaches, referees, or announcers. The implications for success are fairly clear in either case. At American universities, the level of research is roughly correlated with the level of regulatory apparatus and management involvement; research and management have to grow together. Within that range the university should of course avoid unnecessary costs and eliminate wasteful processes. But neglecting management issues will ensure mediocrity. ■

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International Research

between Sarawak and Brunei, in a pristine dipterocarp rainforest. I had been working several hours with some local Malay university students, mapping out palm trees, when a deluge of rainfall cut short our day. I've never seen it rain so hard and long (later I discovered that eight inches had fallen). There was nowhere to seek refuge. We just stood there. Huge branches came tumbling down from the 200-foot canopy, accompanied by lightning and the unsettling clap of thunder,

all adding to our increasing anxiety. But, just as suddenly as it began, the thunderstorm passed, the downpour stopped, beams of sunlight radiated down from the canopy, and the forest went quiet. Then, about 30 feet in front of us, from up a big-butressed dipterocarp, a crested flying dragon (a gliding lizard) leaped away from the trunk and winged its way silently towards a nearby tree, piercing a beam of sunlight as it navigated the steamy tropical air. ■



THESENATE FORUM THE BACK PAGE

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Peer Reviewed Research Publication Opportunity

Dr. Christine Mallon, Managing Editor of the CSU publication, Exchanges

The CSU Institute for Teaching and Learning (ITL) invites submissions to *Exchanges: The On-line Journal of Teaching and Learning in the CSU*. The electronic journal provides a medium for CSU faculty to engage in an exchange of their scholarly and creative work related to teaching and learning in CSU courses and programs. The journal has recently undergone an online conversion from its original print format, appointed a new editorial board, and instituted a peer-review process.

Early last year, ITL Director, Carol Holder, facing restrictions imposed by the print medium, decided to move the ITL newsletter, *Exchanges*, online to reach more readers and present more timely information. In the printed newsletter, ITL could not publish long articles or include many photographs or illustrations. "I considered the limitations that the cost put on what we could publish," Holder explains, "and I saw the online format as a searchable, more cost-effective, more interactive medium that would allow us to reach a broader readership. Also, with the rapidly expanding interest nationally in the scholarship of teaching, I wanted to provide a better forum to promote and disseminate such work by my CSU colleagues."

Expanding the CSU effort to promote excellence in teaching is at the heart of the ITL mission, and *Exchanges* is but one ITL strategy for encouraging faculty involvement in improving teaching and learning. ITL also sponsors symposia, conferences, and the annual Teacher-Scholar Summer Institute, a program offering a series of faculty workshops. The new online *Exchanges* allows ITL to announce these and other events that are important to CSU faculty. In the Calendar of Events and Opportunities, for example, ITL broadcasts timely (and frequently updated) Calls for Papers, Requests For Proposals, conference and workshop notices, systemwide announcements, and ITL-sponsored events. Unlike the print version, *Exchanges* online will be able to post last-minute changes to previously announced deadlines and event schedules, thereby providing a more useful, reliable service to faculty. CSU Faculty

and staff are encouraged to submit their upcoming events to the *Exchanges* calendar by contacting the journal at exchanges@calstate.edu.

Exchanges supports an ongoing conversation about teaching and learning, two foundational values of the CSU system. "With *Exchanges*," explains David S. Spence, CSU Executive Vice Chancellor and Co-Chair of the ITL Advisory Board, "We are seeking to foster informed reflection on teaching and learning in the CSU, and to encourage faculty to present their discoveries to their colleagues in order to further this developing field of knowledge."

So as to include as many faculty as possible in this dialogue, *Exchanges* articles have a broad appeal to faculty across the range of disciplines, and address both the more common and some emerging teaching and learning concerns in the California State University system.

Exchanges research articles (up to 3,500 words) are subjected to anonymous peer review by CSU faculty selected for their familiarity with the discipline or issue. While peer-reviewed articles anchor the journal, *Exchanges* also features shorter works (up to 1,500 words) in reports from the classroom, position papers, media reviews, and creative productions—all penned by CSU faculty and juried by members of the nine-member *Exchanges* Editorial Board, composed of CSU faculty and ITL staff. This year's board members are Mary Allen (CSU Bakersfield), Nancy Page Fernandez (Cal Poly, Pomona), David Frank (CSU Fresno), Patrick Kenealy (CSU Long Beach), Thomas Nolan (Sonoma State), Sorel Reisman (CSU Fullerton), and Alayne Sullivan (CSU San Bernardino), Carol Holder (ITL), and Chris Mallon (ITL).

Together, the two review processes strengthen the precision and ensure the quality of CSU-generated scholarship. Faculty will appreciate *Exchanges*' short editorial review cycle (six to eight weeks in most cases), which is conducted entirely online. In fact, all journal correspondence takes place online—from collecting manuscripts to calling for reviewers, receiving

reviews, and communicating editorial decisions to the authors.

ITL invites CSU faculty to submit their teaching- and learning-related articles and creative works at any time to *Exchanges*, which adds new articles to the Website on an ongoing basis. "For the research articles department," explained ITL Director Holder, "we are particularly interested in reports of classroom research (quantitative or qualitative), investigative or experimental work, library research, and other kinds of scholarship on teaching and learning in the CSU."

In the inaugural edition, authors share innovative teaching strategies, such as CSU Hayward Professor Tom Bensky's on-line, in-class quiz system, which he uses to assess student learning in a Physics course. CSU Bakersfield Professor Jeffrey Mason explains his quarter-long role-playing game, through which students learn the real-world concerns of a theater production company. A Gallery essay by San Francisco State University Professor, Arthur Asa Berger reminds faculty to be sensitive to the learner's needs, and to use patience, precision, and creativity in teaching. In the Viewpoints department, San Francisco State University Professor Jonathan Middlebrook critiques the assessment movement in a sonnet, and CSU Assistant Vice Chancellor of Academic Affairs, Lorie Roth's analysis of selected academic novels reveals that teaching is understood to be a private activity. She suggests that we can improve teaching by making it the topic of scholarly discussion. Readers can respond to the articles in an on-line threaded discussion that provides the valuable feedback element of the scholarship process.

For a brochure explaining the departments, submission process, and technical requirements, or if you are interested in serving as a reviewer, please contact *Exchanges* Managing Editor, Christine Mallon, at exchanges@calstate.edu or (562) 951-4752, or visit the *Exchanges* Website at <http://www.calstate.edu/tier3/itl/exchanges>. ■

