A PUBLIC RESEARCH UNIVERSITY AND COOPERATIVE EDUCATION

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In this article we shall focus on the Work-Learn and Career Planning & Placement Center at the University of California, Davis (UCD) as a case of how a successful cooperative education program can work at a major public research university. This program, which during the 1981-82 academic year served more than 2,000 students, has the strong support of the administration, the student body, and the faculty. How this support came about involved the mediation of pressures among a selective, career-oriented student body, a conservative research-oriented faculty, and a conservative administration answerable in large measure to the faculty. Because UCD is a *public* university, it is subject to pressures from a state that sees the university as a primary source of skilled labor for its workforce. Because UCD is a *research* university its policies are set by a traditional faculty which often does not consider the world of work a legitimate concern. Among these various tensions the campuswide Work-Learn Center acts as the principle mediating force.

To some extent the authors represent the above extremes. One of us is a professional in cooperative education—by training, work experience, and professional commitment. A part of the management of Work-Learn since 1973, Joe Stasulat acts as a principal liaison between the University and those who employ and give internship experience to its students. He works primarily with the agricultural community. The other, Michael Hoffman, is an academic administrator and an English professor on the campus since

1967. Although an amateur to the field of cooperative education by both training and experience, he is the person in management to whom the director of Work-Learn has reported since 1976. As a faculty member he represents many traditional faculty attitudes; as an administrator he is responsible, however, to represent to the administration not only the interests of the faculty but also those of the Center itself.

We shall ultimately focus on the centralized organization of the Work-Learn unit in order to explore that structure's strengths and weaknesses. We shall reflect on the specific strategies that have helped the unit succeed and shall suggest some of the problems and opportunities other experiential learning programs might face during the 1980s. In order best to do that, however, we shall devote the next section of the paper to how the campus' experiential learning programs were set up at what began as a small agriculture campus but has now evolved into the third largest general campus in the University of California system.

History

The Davis campus of the University of California has experienced three-fourths of a century of growth—in size, diversity, innovation, teaching and research eminence. Now a general campus of around 19,000 students with seven schools and colleges, it celebrates its 75th year of instruction in 1983-84.

More than a half-century had passed since gold first glittered in the California foothills when Peter J. Shields, Secretary of the California State Agricultural Society, began the years of effort it took to establish a campus of the University of California with a practical agriculture focus. In 1899, the College of Agriculture was part of what was then the only University of California campus at Berkeley; the college was without a farm, was purely academic in subject matter, and emphasized research in botany and agricultural chemistry. Professor Hilgad, of the University, wrote in the March 15, 1897, issue of *The Pacific Rural Press:*

> As the number of students in the agricultural college increases (there are now 27 attending its courses) the necessity of providing for some regular mode of giving those intending to become farmers the "practical course", which forms the indispensable superstructure of every kind of technical education, makes itself felt. I have already said and written so much on the subject of this needful, supplementary practical course, apprenticeship volunteer system, or whatever else sensitive people may

prefer to call it, that I shall not trouble your readers with another sermon thereon. It is admitted on all hands that such practice is needed to fit the technical student for the actual exercise of his chosen profession; the only difference of opinion is as to whether, and to what extent, such practice may be advantageously carried on simultaneously with education, and instruction in principles.

Whatever view may be held on this point as regards instruction in agriculture, the fact remains that at this time, no farm properly so called is connected with the University. The available tract of land is large enough for illustrative and experimental cultures, and with the aid of the fund available for that purpose, is being occupied as rapidly as possible, with a view to the illustration, on a small scale, of the facts and principles involved in farming. The students distinctly understand that it serves the same purpose as the laboratory, museum, or library; that like these is not only lucrative, but an expense; and that the running of a farm on the large scale, and for profit, must be learned on a *real* farm, not hampered by the requirement of instruction. They are, therefore, taken on excursions to such farms, and encouraged to give at least a part of each vacation to actual work there. In my opinion, no diploma should be conferred in any of the technical courses, until a year's "practical course" has been duly gone through by the candidate. Such is the practice in the most successful European schools.

But the student should not go where he will learn *bad* practice during his apprenticeship; nor, in ordinary cases, should he confine himself during all that time to one culture, or set of cultures, or locality. He should go where he can learn the best practice, in the different agricultural regions of the State. . .

We desire that the students of the agricultural college should have such opportunities given them as often as their time will permit *during* their course of study, and especially *after* its conclusion. Let such, then, as are willing to put their shoulders to the wheel themselves, come forward and declare their willingness to receive students as laborers, or in such other capacity as they may be found fitted for, for short or long periods, as the case may be; compensating them or not, according to the degree of their usefulness, and possibly considering a little extra trouble in the way of explanations, etc., in the same light as jury duty or any other public service rendered gratuitously.

This lengthy quotation will give the reader not only a good sense of the original impetus toward practical educational experiences in California higher education, but also should give a sense of the timelessness of some of the concerns. Other than the slightly archaic diction, the letter could well have been written today by a similarly concerned member of the faculty.

In October, 1905, L.H. Bailey, Dean of Agriculture, Cornell University, in an address to the delegates of agricultural societies, pointed out that nearly all land-grant colleges had working farms for research and instructional purposes. At this date the California Legislature had appropriated funds to purchase such a farm. In 1906 a 781-acre site was purchased in Davisville, California for $103,240. The heart of the present campus lies on this site.

The need to provide a practical component to the undergraduate instruction in agriculture and a need to develop a teaching and research farm within the University of California system were the foundation of the Davis mission. Instruction began in 1908 with 28 male students, and the first woman began attending classes in 1914. By 1927 enrollment had grown to 450 men and 5 women. By the early 1940's the campus had increased in size to over 1,000 acres and enrollment stood over 1,200 students. (The campus now contains almost 4,000 acres.) In teaching and research the University of California at Davis had established itself as a leading American agricultural institution.

In January 1949 the Regents of the University of California received a gift from Mr. Fred H. Bixby that was to have a major influence on the Davis campus's involvement in cooperative education. The gift was unsolicited, and much discussion ensued before the Regents accepted the gift.

The strings attached to Mr. Bixby's gift were quite clear, as one can see from his letter to the Regents:

> Gentlemen:
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> I hereby assign. . .and transfer to The Regents of the University of California, an educational institution, now located in California, the following described property:
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> Two Thousand Five Hundred (2500) shares of the capital stock of Fred H. Bixby Company, a California corporation.
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> This gift shall be known as the Fred H. Bixby Fund, and the income and dividends from said shares shall be used for the following purposes in the College of Agriculture maintained by the University of California, namely:
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> A. To enable the College of Agriculture, with the cooperation of

farmers engaged in the several agricultural industries of the State of California, to enlarge the educational experience of students by providing during vacation periods or at other times experience in farm practices designed to acquaint students with an understanding of the most economical and successful methods of conducting a farm enterprise.

It is desired that students be enabled to gain knowledge of and experience in various farm operations such as but not limited to the following operations depending upon the type of farming in which they are engaged, or in which they propose later to engage, namely:

1. Students should learn the proper methods of leveling land for irrigation in order that water may be applied most effectively and economically and for satisfactory crop production.
2. Students should learn how to construct a barbed wire or other type fence.
3. Students should learn how to operate and make simple repairs to various kinds of farm machinery and tools such as tractors, plows, harrows, discs, drills, seeders, harvesters, and the like.
4. Students should learn the proper rates of planting grain, forage, root, vegetable, tree and vineyard crops.
5. Students should understand the principles of irrigation, drainage, soil management, fertilization, and the like, in order that they may make the land they farm most productive.
6. Students should understand the utilization inasfar as possible of all farm wastes.
7. Students should understand the utilization of all by-products of the farm, such as straw, beet tops, off-grade or unmarketable vegetables, hay or other products.
8. Students should be instructed in the best methods of breeding, feeding, caring for,

and management of, the various types of livestock of the State including horses, cattle, sheep, swine, and poultry.

B. It is also the purpose of this endowment to enable the University to assist students in finding employment as workers, foremen, managers, and ultimately operators of successful farming enterprises.

During the next three years committees were appointed, agendas were established, and the program inched forward. But not to Mr. Bixby's liking, for in 1951 Professor Hutchison, Vice President of the University and Dean of the College of Agriculture, received the following letter from Mr. Bixby:

Dear Dean Hutchison:

I would like to call to your attention a matter that is being handled at the University at Davis in a most unsatisfactory manner.

You remember that in January 1949 I made a gift to the Board of Regents of 2500 shares of my Fred H. Bixby Company stock. The dividends in 1949 amounted to $10,000.00, dividends in 1950 were $10,000.00, dividends so far in 1951 $5,000.00, and you can easily plan on another $5,000.00 in 1951.

In short you are receiving $10,000.00 per year on this stock—a total so far of $25,000.00—and apparently nothing has been done to carry on the fundamental ideas of this gift, other than to put Mr. Munyon as the head of this "Practical Farming" course of mine. And all he is doing is to find employment for the graduates of Davis *after* they have graduated. My plan was to have this actual experience "on the farm" as a part of the course, that the boy that goes to Davis could have. . . .

With kindest personal regards.

Mr. Bixby's letter had its hoped-for effect. During the late 1950's and early 1960's, an Agricultural Practice program was established which placed students in a cooperative educational program at ranches and farms throughout the state in an effort to provide undergraduates with practical farm experience while they were enrolled on the campus. In the meantime, the Master Plan for Higher Education in California established U.C. Davis as a general campus in 1959. A School of Veterinary Medicine and a College of Letters and Science had already been established. A Graduate Division, College of Engineering, and Schools of Law and Medicine were to be

founded in the 1960's. (A Graduate School of Administration opened its doors to students in the fall of 1981.) The increasing diversity of the campus saw the establishment of internship programs in a number of campus departments. In addition, the 1960's provided an atmosphere of "relevance" in which both students and faculty members increased the pressure on the institution to establish greater opportunities for experiential education.

In 1971, as a result of the great diversity of internship offerings, Chancellor James H. Meyer established a task force of faculty members to study the organization of experiential education programs at Davis. The task force was charged with making recommendations concerning possible campuswide organizational and administrative changes that might facilitate the expansion and ensure the continued success of these programs.

The impact of this task force was as significant as the Bixby gift, for its report was to prove the foundation for the Work-Learn program at UCD. Of major significance were the following three points:

1. The efforts shall be campuswide in scope.
2. The effort shall be an academic component of the campus.
3. The effort shall merge career planning and placement.

Because the task force report embodies the philosophy guiding UCD's cooperative learning programs, it is worth quoting at length.

Report of the Task Force on Work-Learn

> The experiential learning concept has a long and successful tradition in American higher education. The idea, often referred to as "Cooperative Education," or "Internships," or "Work-Learn," is essentially the same regardless of the name. Simply stated, it is that students can benefit educationally by working under the direct supervision of instructors and professionals in jobs that link formal academic instruction with practical field experience. Many land grant universities, especially through their agricultural colleges, have offered "field" training from the very beginning. In a number of professional fields—medicine, for example—the internship is an integral part of professional training. In some private colleges, such as Antioch, the Work-Learn concept has become a featured part of undergraduate education.
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> On the Davis campus, Work-Learn programs are not new. The Agricultural Practices program began in 1949, supported by endowment funds from Fred H. Bixby, PROBE (Professional and Occupational Broadening Experiences), started in 1969 as an

outgrowth of Project Involvement. The Public Affairs Internship program in Political Science originated in the same year, and was funded at first by a small Innovated Projects grant. Other Work-Learn programs have taken shape recently in Environmental Studies, Applied Behavioral Sciences, Environmental Horticulture, and Community Development. The School of Medicine is now co-sponsoring an undergraduate Work-Learn program in the Health Sciences. And a program of "Cooperative Education" was beginning to take form in the College of Engineering.

In short, Work-Learn programs at Davis, though not widely heralded, developed considerable strength. Expansion has been particularly notable. The problem was that the existing Work-Learn programs function separately and with only a minimal exchange of information. More than 300 students are involved in the Spring Quarter in 1972. They shuttle from progam to program seeking the information they need. Interested faculty were often not informed of the opportunities available in these programs. Attention was to be given to the tasks of establishing a central clearinghouse of information about the Work-Learn programs on campus and of providing the necessary campuswide support that will insure their success. The success of the campuswide Work-Learn program was to depend upon the full cooperation of the faculty and the full recognition of Work-Learn as a legitimate educational option for all interested students.

With leadership, encouragement, and support from the Chancellor, faculty members, and students, the following objectives were established in 1972:

1. To assist students in clarifying their personal and educational objectives.
2. To encourage the integration of academic education and practical experience.
3. To enable students to obtain practical educational experiences, outside the campus community and within the University itself, which will complement and enhance traditional educational processes.
4. To aid students in the exploration of potential career opportunities and in career planning, guidance, and placement.

Other significant policy recommendations stated:

1. The Work-Learn Program at Davis should be a campuswide program headed by a Director of Work-Learn, who shall be a member of the Academic Senate.
2. The Work-Learn Program should be defined as an educational program designed to complement classroom instruction. It should be integrated with teaching, academic advising, career guidance, and placement.
3. The Work-Learn Program should be broad and flexible, offering interested students a wide range of choices. It should include Work-Learn opportunities at various levels of intensity and involvement. There should be Work-Learn openings for lower division students who are not sure of their career objectives. There should be Work-Learn opportunities for students who desire monetary compensation and on-the-job training. Intensive preprofessional internships, emphasizing learning rather than monetary compensation, should also be accommodated. Participation should be on a voluntary basis.
4. Individual students and faculty should be encouraged to develop their own Work-Learn projects. The campuswide Work-Learn Program should facilitate and coordinate such individually initiated projects by providing recognition, assistance in evaluation, and all possible institutional support so as to increase the probability of success.
5. The Work-Learn Program should have faculty participation at every level, including advising, counseling, job development, field supervision, evaluation, and the awarding of academic credit.
6. Faculty supervision of students in the Work-Learn Program should be recognized as part of the regular teaching function and should be evaluated and rewarded accordingly.
7. There should be no restriction against awarding academic credit to Work-Learn students who receive monetary compensation, if the appropriate criteria have been met for the awarding of academic credit. As a matter of policy, it should be recognized that a student may learn by doing a job for which he is receiving pay. Work-Learn students not receiving academic credit, whose work has been conducted in accordance with established procedures and certified by the Work-Learn Director or designated Work-Learn unit, should receive

a transcript entry recording the Work-Learn experience, as is the current policy.

The 1970's and Beyond

The campuswide Work-Learn Center opened its doors in the Fall of 1972, embodying in its programs and structure the principles stated in the task force report. The first director, Professor Verne Scott, a water scientist, was a prominent faculty member in the College of Agricultural and Environmental Sciences and a former chair of his department. He developed a structure that established academic coordinators for the various general areas of undergraduate enrollment on the campus. These coordinators were responsible for setting up academic internships with an increasingly wide variety of public agencies and private concerns, and for placing students in internships appropriate to their training and academic levels.

Business boomed right from the start. Students were able to participate in internships in a variety of ways: for credit, for pay, or simply for transcript notation. Within only a few years, more than one thousand Davis students were taking internships, and today they number more than two thousand annually. Coordinators were established in Agriculture, Health Sciences, Engineering and Liberal Arts. Each area has a program manager and at least one professional coordinator. The work force of over 40 includes part-time student interns, assistant coordinators, and support staff. The Director is a half-time appointment for an academic faculty member and the Unit reports to the Assistant Vice Chancellor—Academic Affairs.

Almost from the beginning the Work-Learn Center was combined with the Career Planning and Placement Office under the assumption that there was a logical continuity between internships in the work place during college and placement in the work place following graduation. The marriage of Work-Learn and Career Planning/Placement was begun under Verne Scott and completed under his successor Orville Thompson, who succeeded Scott in 1979 after ten years of chairing the Department of Applied Behavioral Sciences. Although philosophically sound, the merging of a student affairs unit with an academic unit did not proceed without some difficulty because of some distinctly differing senses of mission. To speak generally, the faculty considered internships to be an academic matter requiring a stringent faculty oversight. They were not to be designed primarily to promote the employment of students after leaving Davis. The students and the Placement Center had a somewhat different perspective. The adjustment took a number of years to bring about. Now, however, all the

coordinators work in both internship placement and job placement, often using the same firms for both functions and occasionally with the same students moving from a successful internship to a position with a satisfied employer after taking a degree.

It is important to understand the processes of organizational growth and the sequence of institutionalizing a program. Following a period of programmatic experimentations, which usually seems to be allowed to the "new kid on the block," the Center entered a period of justifying itself to the academic community. This justification took place, occasionally painfully, and is a continuing process. Documentation of learning rather than process became the agenda item for faculty skeptics. But just as the results or publications of faculty work efforts can be evaluated, so, we believe, may the results of a cooperative education program. In both cases there must be evidence of continued growth, creativity, innovation, and excellence. Although occasionally uneasy about it, the faculty has by and large come to accept the academic justification for the intership programs.

In terms of the overall campus organization, the Center has, since 1973, been directly under the Office of Academic Affairs. This decision placed the unit in the academic pipeline and allowed it access not only to academic funds but also to the stewardship of an academic administrator responsive to both the faculty and the central administration. Since 1976, when the position of Assistant Academic Vice Chancellor was established, the unit has answered directly to that person.

The relationship has not been without its problems. At times Directors Scott and Thompson would both have preferred more functional autonomy. But, on balance, we believe the support of the central administration has been useful, particularly in the different years since the passage of Proposition 13; because aside from funds from the Bixby Endowment, Work-Learn is funded from the regular Instruction and Research budget and from student fees. The fact of hard money brings with it close faculty surveillance, but it also means a greater fundamental security for the unit. During a time when similar programs all over the U.C. system and the United States were being cut back, Davis's Work-Learn Center continued to grow in both student usage and budgetary resources. We believe the system works well.

The campus administration considers Work-Learn a central part of its continuing attempt to make the Davis campus an attractive place for talented undergraduates. Research universities must always fight against a tendency to slight their undergraduate programs and students. Particularly with academic support programs—as opposed to mainline academic disciplines—is the temptation great to cut budgets when dollars are short.

We are convinced, however, that our experiential learning programs bring us more students; help us retain them when they get here; train them better for both further study and for employment after graduation; and create alumni loyal to an institution that was obviously concerned for their personal and intellectual welfare. In any academic planning exercise at UCD, Work-Learn plays an important role.

But administrative support would be fruitless were it not for the support of the faculty who must supervise the internships, and without whose academic review and oversight the programs would not exist. At any research university—perhaps particularly at the University of California—the faculty plays a powerful role in university governance. Academic administrators who ignore the will and judgment of the faculty will find themselves back in their departments. This is not to say that administrators cannot lead, but their leadership can work only if they have a full understanding of the values and aspirations of the campus faculty. And in times of tight budgets the collective faculty will have a loud and persuasive voice in all programmatic decisions.

That is why academic support units—including those involved in experiential education—must be carefully placed in the university's governance structure to insure that they are not damaged by adjustments made during times of fiscal stringency. They should always be led by faculty members of high academic stature; they should be on permanent funding; and they should report to the chief campuswide academic officer. If a lesson can be learned from the current success of experiential learning at Davis, it seems to us to lie in these facts.

But it should be remembered that close contact with the faculty also means certain difficulties for the unit—difficulties, however, that are ultimate strengths. The faculty are there to remind us that internships can never replace the classroom, the laboratory, the library—experiences that will continue to remain the essential stuff of a university education. But as we all know, internships are a crucial complement to these. They can serve to make all traditional instruction more meaningful; they are the leaven of reality for students of traditional college age who are crossing the boundaries into responsible adulthood with only schoolwork as a primary experience—whether that passage leads them into a job after college or into further study.

In conclusion, we should like to state our belief that the 1980's will be a good decade for experiential learning programs; but they will fare well only if they are founded on strong academic values that reflect those of their home institution and its faculty. And if its place in the campus governance structure protects the unit at the higher administrative levels and also pro-

vides the best liaison to the academic leadership, there is no reason why units such as Davis's Work-Learn Center cannot flourish and provide their own kind of academic leadership.