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ABSTRACT

This document presents a study of the joint use of educational facilities among public and private colleges and universities in California. The study was undertaken because it was felt that the necessity for building higher-cost, specialized campus structures might be reduced at some savings to taxpayers if individual institutions could be encouraged to share in the use of such facilities. Thus, the author of this report presents: (1) the forms, characteristics and objectives of interinstitutional cooperation; (2) an inventory of current facilities sharing arrangements among California's institutions of higher education; (3) examples of interinstitutional cooperation in other states; (4) obstacles to interinstitutional cooperation and facilities sharing; and (5) the means of encouraging increased facilities sharing among California's institutions of higher education. (HS)

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An Exploratory Study of Facilities Sharing
Among Institutions of Higher Education
In California
for the
Coordinating Council for Higher Education

Jerome Evans
California Research Consultants
April 10, 1971

#428

COORDINATING COUNCIL
FOR HIGHER EDUCATION

Resolution Concerning the Development
of Procedures and Criteria for
Sharing Educational Facilities

- WHEREAS, It is the policy of the Coordinating Council for Higher Education to insure that maximum benefit is received from the public funds made available to California's institutions of higher education, and
- WHEREAS, Unnecessary duplication of physical facilities is inconsistent with such policy, and
- WHEREAS, The Coordinating Council for Higher Education finds that, where feasible and appropriate, the joint utilization of both existing and new physical facilities; particularly, single or special-purpose facilities, may significantly reduce the facilities required to meet the higher educational needs of California's students; now, therefore, be it
- RESOLVED, That the Coordinating Council for Higher Education advise the Board of Governors of the California Community Colleges, the Board of Trustees of the California State Colleges, the Board of Regents of the University of California, and the private segment of California higher education, in cooperation with the Department of Finance, staff of the Joint Legislative Budget Committee, and the staff of the Coordinating Council for Higher Education, to develop procedures to insure that joint use of facilities will be encouraged and will be considered in planning for new facilities, new campuses, and all single- or special-purpose educational or research centers or facilities, and be it further
- RESOLVED, That the Council should direct its staff in cooperation with the segments to further study the matter of facility sharing towards defining facilities in areas which should be considered for joint use in accordance with established criteria, and be it further
- RESOLVED, That such procedures shall be submitted to the Coordinating Council for Higher Education for review and comment no later than 1 June 1972.

Adopted
December 7, 1971

Acknowledgements

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The author is indebted to those campus officers at each public and private institution of higher education throughout the State who responded to questions regarding cooperative arrangements in which their institutions participated, and especially to those persons associated with the several individual facilities and campuses which came under further study.

The author is also indebted to the staff of the Council for assistance in planning and carrying out this study.

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INTRODUCTION

For several years the Coordinating Council for Higher Education has been urged to undertake a study regarding the joint use of facilities among public and private institutions of higher education in California. The basis for this interest is the often expressed view of individual legislators, governing board members, and others that the necessity for building higher-cost, specialized campus structures might be reduced at some savings to taxpayers if individual institutions could be encouraged to share in the use of such facilities.

A recommendation to this effect was included, for example, in the 1968 report of the Governor's Survey on Efficiency and Cost Control. Recommendation 14, on the subject of higher education, called upon the Council to:

Require joint utilization of higher education facilities to avoid unnecessary construction of new colleges and duplication of facilities and personnel.

Each institution in the three systems must provide basic facilities, including administration building, library, gymnasium, cafeteria and the like. When the number of students is small, the cost per student to provide these facilities is naturally high. Further, the facility is generally not equipped to provide the educational excellence available at better established institutions (size of library, for example). When institutions of higher education are immediately adjacent, or in close proximity, or are proposed for concurrent construction, the provision of duplicate facilities, with its use of land, and staffing separate positions to provide the same function are unjustified.

In response to that report and similar recommendations from other sources, the Council included a study of the joint use of higher education facilities within its 1969-70 proposed study outline for long-range planning under the federal Higher Education Facilities Act. In July of 1970, upon approval of the planning fund expenditures by the Council and the U.S. Office of Education, the Council engaged the author of this report to undertake an exploratory study to include, "...an inventory of current shared facilities, a projection of possible further opportunities for joint use of facilities, and an analysis of costs and benefits of both current and projected cases of joint use of facilities..."

Based upon this directive, the study has been organized to cover the following principal elements:

(1) The Forms, Characteristics, and Objectives of Interinstitutional Cooperation. A preliminary discussion of the potential benefits to be obtained from the joint use of facilities and related forms of interinstitutional cooperation; the various forms which institutional

cooperation can take; and recent trends in interinstitutional cooperation nationally.

(2) An Inventory of Current Facilities Sharing Among California Institutions of Higher Education. A detailed discussion of four major examples of facilities sharing among California institutions and the results of a campus-by-campus statewide survey of facilities sharing.

(3) Examples of Interinstitutional Cooperation in Other States. An examination of significant facilities sharing efforts and achievements in other states in terms of their objectives, procedures, structure, and benefits. This survey has been based upon a review of institutional and agency reports, the findings of others who have examined these programs, available publications dealing with the subject, and communication with several persons directly involved. One on-the-spot study of a major regional consortium was undertaken.

(4) Findings and Conclusions Regarding the Obstacles to Interinstitutional Cooperation and Facilities Sharing. A Statement of what has been learned from recent experience in California and in other states as to the principal obstacles to cooperation and facilities sharing among institutions of higher education and the prospects for overcoming those obstacles.

(5) Expanding the Joint Use of Facilities Among California's Public and Private Institutions of Higher Education. General conclusions as to what needs to be done to increase facilities sharing, programs and facilities most compatible with sharing arrangements, an examination of the potential for facilities sharing in several specific fields, and consideration of methods to be used to achieve increased joint use. Consideration of the various costs and benefits which may be expected from additional sharing, to the extent that the costs and benefits can be predicted with reasonable accuracy.

(6) Recommended Actions and Policies to Encourage an Increase in Facilities Sharing in California. Recommended policy and procedural guidelines for the Council, the segments, and related State agencies to achieve greater facilities sharing among both public and private campuses.

For the purposes of this study, the terms "facilities sharing" and "joint use of facilities" have been used interchangeably and have been defined broadly to encompass not only specific agreements between two or more institutions to share in the use of a given building or portion of a building (of which there are very few examples), but also those formal and informal cooperative arrangements which directly or indirectly result in some form of facilities sharing. As will be seen, this definition brings into consideration a very wide variety of cooperative devices, thus complicating analysis but also making it possible to deal with a larger portion of the real academic world than would otherwise be justified.

This study has been pursued as an initial exploration of the prospects and potential for increased facilities sharing among California's institutions of higher education, rather than as a definitive study of the subject. Accordingly, the series of recommendations presented for the Council's consideration, at the end of the report, is not based upon "final conclusions" but upon tentative judgements derived from what is now known. Whatever action may follow from these recommendations, it is hoped that the study will stimulate further, continuing concern for institutional cooperation of this nature.

1. The Forms, Characteristics and Objectives of Interinstitutional Cooperation

Prior to 1945 the lack of system and rationality of organization in higher education stamped the development of colleges and universities in most states. The great wave of new institutions which swept from coast to coast during the 18th and 19th centuries left most of them, public and unpublic, independent of all others. Each had its own lay board of trustees, each pursued goals, established programs, and sought students with little or no regard for what other institutions, distant or near, were doing.¹

Unfortunately, these words hold true in large measure for the even greater wave of new institutions which arose in the massive enrollment boom of the 1950's and 1960's. With the important exception of the statewide systems which have been established in several of the larger states, individual institutions of higher education have retained what often seems to be a very parochial view of their own importance and role within the academic community. Even within the larger public systems of higher education, interest and attention is more often focused upon the needs and operation of individual institutions as institutions than upon assembling resources in a manner which will most effectively and efficiently meet the needs of the state's citizens. Whatever the merits of the unified, self-sufficient campus in meeting these needs, its basic structure has seldom been challenged.

Another close observer has described the common situation in these terms:

To a large degree the application of the term inter-institutional 'cooperation' may itself be a misnomer, if one presumes that the term means institutional personnel must harbor feelings of altruistic and selfless concern for their own college's welfare. The historical insularity of institutions of higher education and their deliberately distinctive nature deters such a phenomenon in most collectivities, regardless of how rational and welcome such a development might at times appear to be. Self-sufficiency has been the watchword for too long a time to be abandoned rapidly.²

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1. Lyman A. Glenny, "State Systems and Planning for Higher Education," Emerging Patterns in American Higher Education, Logan Wilson (Ed.), American Council on Education, 1965, p. 86.
 2. Fritz H. Grupe, "Toward Realism in Initiating Collegiate Cooperative Centers," Academic Consortia Seminar, March, 1970. Copies of paper

It is nevertheless also true that many institutions, particularly in the past few years, have begun to experiment, formally and informally, with a variety of cooperative arrangements with other institutions. These experiments suggest what can be achieved in this way where there is sufficient motivation.³ Although most of these arrangements do not require a very significant resource commitment on the part of participating institutions, and many appear more substantial on paper than in actual practice, there are more than a few which do have an important impact upon the institutions concerned.

With perhaps a handful of exceptions, however, the participating institutions have not entered into these arrangements primarily for the purpose of sharing campus facilities. They have been undertaken to obtain highly sophisticated and costly equipment (e.g., federally financed nuclear reactors), to pool faculty talent in new areas of research and instruction, to deal with governmental agencies with a more or less common voice, and to placate interinstitutional jealousies which threaten the existing order. They have also been undertaken to enable "mature" institutions to aid "developing" colleges, to justify the establishment of highly specialized off-campus research and instructional programs, and to share the risk in new endeavors which appear to go beyond the bounds of conventional academic activity.

Some of these arrangements are predominantly academic, involving research or instruction or a combination of the two; some are predominantly administrative, concerned with such things as purchasing, development of information systems, student services, or fund raising; and some are concerned with more difficult to classify service activities related to museums, galleries, community relations, economic development, etc. Some involve institutions which are immediately adjacent to one another, and some involve campuses which are widely scattered within a single state, or which are separated by state and even national boundaries.

available through the Aquainter, Kansas City Regional Council for Higher Education, Kansas City, Missouri.

3. Although interinstitutional cooperation is still in an early stage of development across the country, interest in its forms and purposes has grown rapidly in the past ten years. The first national conference on college and university interinstitutional cooperation was held at Princeton in 1962. Subsequent conferences were held by the Catholic University of America in 1964, at Morehouse in 1965, at the University of Wisconsin in 1967, and by the College Center of the Finger Lakes in 1970. In the meantime there have been numerous studies of the number, form and objectives of various arrangements for interinstitutional cooperation and action by the U.S. Office of Education, and at least two state legislatures have passed legislation to encourage further development.

Organizational Patterns

There are at least seven identifiable organizational patterns of interinstitutional cooperation which reflect the number of institutions involved, the formality of their ties, and their objectives. These are: cluster colleges, "coordinate" colleges, instructional and research centers, multipurpose consortia, single purpose consortia, regional associations and compacts, and informal bilateral cooperation.

The oldest and also the rarest organizational form is that of the cluster college which, as writers on the subject are fond of pointing out, can be traced back to Oxford University. The Claremont Colleges, discussed in some detail later, provide the principal and most fully developed example in this country. The term is necessarily defined by this example -- a grouping of small independent campuses, immediately adjacent to one another, which share certain central services, permit a free exchange of students, and make some joint use of faculty and facilities. Although the cluster-college concept can also be employed by a single large institution seeking to decentralize its undergraduate instruction, (and is often defined to include such institutions), such an arrangement necessarily falls outside the subject of interinstitutional cooperation.

The terms "coordinate college" and "affiliated college" are used to describe the pairing of institutions which most often results from the union of an independent men's college with an independent women's college. The usual objective of such unions is to strengthen one of the pair by giving its students access to the faculty and instructional facilities of the other, or simply to make both more attractive to students who want a coeducational environment in which to carry on their studies as undergraduates. As an example, Marymount College and Loyola University formed an affiliated college in 1968 when Marymount moved from its Palos Verdes campus to Loyola's campus.

Instructional and research centers may be formed by several institutions which feel a common need for expanded research or graduate instruction, but individually lack sufficient resources. Or they may be formed by other agencies. A college or university center, such as the Atlanta University Center, may be organized separately from the participating institutions, yet provide mutual facilities within daily commuting distance. The Graduate Research Center of the Southwest, on the other hand, was established in 1961 by the State of Texas as a private, nonprofit institution for research and graduate instruction, with cooperative assistance to other institutions in the region. Centers often have directors whose role approaches that of a college president.

The fourth form of interinstitutional cooperation is the multipurpose consortium. The term consortium has become very popular on the educational scene in recent years, with the result that it has been applied to a very wide range of interinstitutional arrangements and is correspondingly difficult to define. Most often,

however, consortia are federative arrangements for planning and coordination in specific areas of interest to the participating institutions. One writer has defined a consortium simply as ". . . an arrangement whereby two or more institutions -- at least one of which is an institution of higher education -- agree to pursue between or among them a program for strengthening academic programs, improving administration, or providing other special needs . . .," but excluding associations, regional laboratories, clinical affiliations, and student teaching arrangements.⁴ However, this definition encompasses a very large number of single-purpose, bilateral agreements, many of which are of very minor significance.

A more restrictive set of criteria, developed by Lewis D. Patterson of the Kansas City Regional Council for Higher Education, defines a consortium as a voluntary, formal organization of three or more member institutions, covering "multi-academic" programs, with specific programs administered by at least one full-time professional and a required annual contribution or other evidence of long-term commitment from member institutions.⁵ By this definition there were sixty-one reported consortia in the United States in 1970, including three in California.⁶ The sixty-one range in organization and activity from the cluster-college structure of the Claremont Colleges to the sprawling Northwest Association of Private Colleges and Universities (twenty-four institutions), and include several three- and four-campus consortia which have gone little beyond the initial organizational stage.

Single purpose consortia, which are more numerous by far than multi-purpose consortia, may be formed for a limited period to undertake institutional research, to seek to obtain federal assistance, or to provide for a very restricted program of student or faculty exchange.

Regional associations and compacts are often similar to multi-purpose consortia. However, the relationship among the members is much more loosely drawn, the principal goals fewer, and, ordinarily (except in the case of regional compacts), there is no full-time central staff. The tie that binds is geography, but in practice

4. Raymond S. Moore, Consortiums in American Higher Education, 1965-66, U.S. Office of Education, Sept. 1968.

5. Directory of Voluntary Academic Arrangements in Higher Education (Consortia). Fourth Edition, Kansas City Regional Council for Higher Education, Kansas City, Missouri, Nov. 1970.

6. The Claremont Colleges, The Greater Los Angeles Consortium, and the San Francisco Consortium.

it is often a very weak linkage. In many cases official contact for planning and administration occurs only at the level of the chief institutional officers.

The Associated Colleges of the Midwest, the Great Lakes College Association, and the Central States Colleges Association are frequently placed in this category. Ordinarily, as in these organizations, association members share similar stature and purpose as institutions.

Regional compacts have become, since 1940, important devices for linking institutions located in different states, originally to facilitate intercampus enrollment in medicine (e.g., between Virginia and West Virginia) and other high-cost programs, but more recently for a broader range of interaction. Interstate compacts have been a handy device in higher education, as in other areas of public policy, because they traditionally make few formal organizational demands on the participating parties and permit a great deal of ambiguity as to commitment and responsibility. Compacts, it should also be noted, go by a number of different names: the Western Interstate Commission for Higher Education (WICHE), of which California and twelve other western states are members; the New England Board of Higher Education, which covers the six New England states; and the Southern Regional Education Board.

Finally, and most frequently, interinstitutional cooperation occurs in the form of informal, bilateral arrangements between institutions and between or among individual staff members of two or more institutions, such as faculty members of the same or related departments, etc. As one commentator has noted, "Most forms of cooperation and facilities sharing have originated quietly and without publicity and continue in the same vein."⁷ This is certainly true

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7. Sister Mary D. Salerno, "Patterns of Interinstitutional Cooperation in American Catholic Higher Education," *National Catholic Educational Association Bulletin*, 62:1-31, May, 1966, p. 24.

This point is made most forcefully by Dr. Frank R. Putnam: Interinstitutional cooperation in the broadest sense has many forms, and as many fictions. By one estimate there are some 1,311 associations or consortia of educational institutions, or about as many as there are accredited colleges. Add to these the professional societies that link the faculties by discipline, and there appears to be a vast network for cooperation. Yet, though administrators pride themselves on this multiplication of channels of communication, the implementation is generally weak and depends more on the moonlighting peripatetic professor than on modern media of communication or transportation.

Putnam, "Interinstitutional Cooperation in the Natural Sciences," *Liberal Education*, March, 1968, p. 47.

in California where almost all interinstitutional cooperation takes this form, in no small part as a consequence of the very strong barriers to overt cooperation across segmental lines.⁸ The larger the institution the more extensive its network of informal cooperative arrangements with other institutions is likely to be, particularly if the institution is, in effect, a national university which draws faculty from other national institutions, for it is among such faculty that these arrangements thrive.

Bilateral cooperation takes many forms, including:

- (1) Joint baccalaureate programs;
- (2) Joint honors courses;
- (3) Cooperation between two-year and four-year colleges in cultural offerings, seminar sessions, library usage, and athletic facilities;
- (4) Joint graduate study; and
- (5) Cooperation between liberal arts institutions and specialized institutions such as schools of art, music, or drama.

Objectives

The purposes and objectives of interinstitutional cooperation vary as widely as the forms and organizational framework. Most cooperative arrangements, however, are intended to serve one or more of the following objectives:

- (1) To diversify and expand the number of academic and vocational specialties available to students.
- (2) To upgrade and extend manpower training, continuing education, and educational opportunity.
- (3) To permit established as well as less-well-developed colleges to strengthen themselves and so that they can continue to participate in the mainstream of academic life.
- (4) To increase the rate of acceptance and utilization of educational innovations.

8. That is, between the University of California and a California State College, or between a State College and a Community College.

- (5) To focus attention on the solution of problems common to all institutions of higher education.
- (6) To provide educational programs and services in geographic areas inadequately served in the past.
- (7) To concentrate and coordinate institutional, state, and federal resources on the solution of regional problems.
- (8) To improve the administrative and fiscal management of higher education.
- (9) To enable colleges and universities to develop and maintain the teaching and research resources needed to attract and retain quality faculty and staff.

The objectives are applicable in whole or in part to nearly all forms of interinstitutional cooperation.⁹ In the more informal arrangements, however, the objectives may not be stated or may be stated in much more specific terms. Formal structures for interinstitutional cooperation, on the other hand, occasionally claim even more comprehensive and generalized sets of objectives.

Evaluation

Unfortunately there have been few studies of the extent to which cooperative arrangements have achieved the objectives for

9. The comparable list of objectives of multi-purpose consortia suggested by Lewis Patterson of the Kansas City Regional Council for Higher Education includes the following points:

- (1) To reduce unit costs of major services such as libraries, computer centers, management information systems, and financial accounting.
- (2) To increase academic opportunities available to students at a minimum cost to the student and the institution, without sacrifice in quality.
- (3) To strengthen the faculty by increasing the institution's bargaining position.
- (4) To increase the flow of funds through cooperative fund raising and joint-project applications.
- (5) To strengthen student recruitment by expanding the range of course offerings.
- (6) To improve institutional management capability.
- (7) To enrich campus "cultural" life.
- (8) To increase the quality and quantity of communication among the institutions for their mutual benefit.
- (9) To make community and government service programs more effective.

which they were established. If a cooperative arrangement remains in existence for more than a few years, it is usually assumed by outsiders to be successful, either in terms of its initial objectives, or in relation to purposes which only revealed themselves after the initial decision to cooperate had been made. In no small measure the lack of explicit evaluation reflects the fact that a great many cooperative arrangements are begun with only the vaguest notion of what they are to accomplish. If they survive to become something more, that survival is taken as the measure of success.

Accordingly, there have been few efforts to carefully assess the cost consequences of individual cases of interinstitutional cooperation. Apparently the only published study is one which was undertaken at the Claremont Colleges.¹⁰ In that study operating costs for the individual Colleges were compared with costs for matching institutions with respect to libraries, business services, student health services, counseling, and campus maintenance and repair. Using the data at hand, the authors determined that the cluster concept yielded significant savings in the library, business services, and health services areas.

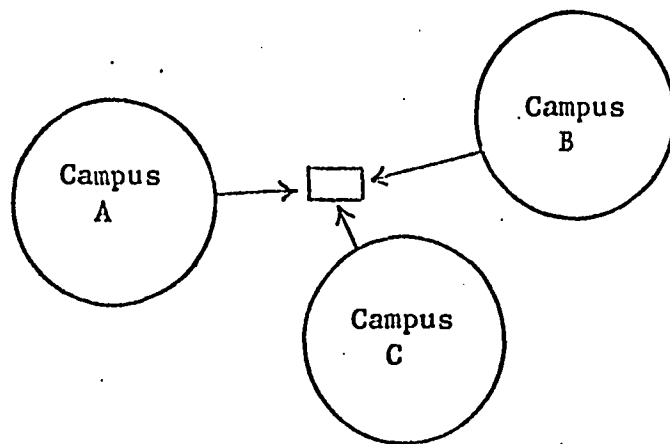
Forms of Facilities Sharing

Within any particular cooperative organizational structure, facilities sharing can take one of three basic forms: sharing of a central facility, sharing of a satellite facility, and sharing of a "single-owner" facility.

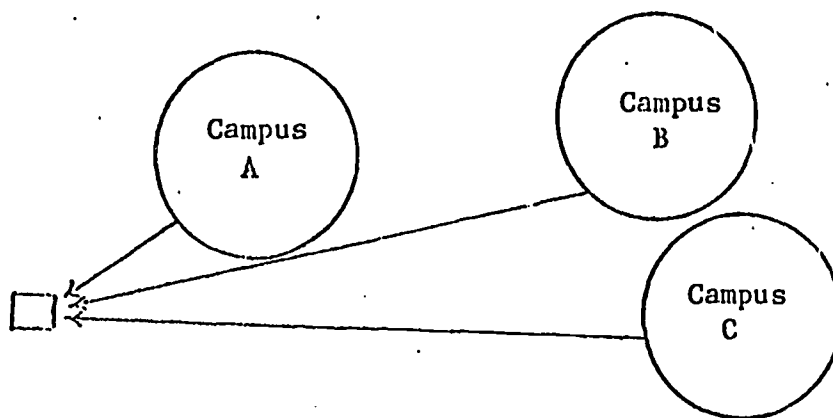
Most existing facilities sharing involves either a satellite facility or a single-owner facility. Sharing of a central facility occurs only where there is a grouping of institutions (e.g., the Claremont Colleges) which agree to provide certain central services jointly. Such arrangements are relatively rare. More often sharing involves a satellite facility at some distance from the cooperating institutions, such as an agricultural field station, a marine laboratory, an urban center, etc. Still more often, sharing involves a facility which is located on the campus of one of the participating institutions and is made available to students or faculty of the other institutions. Examples are major research libraries, nuclear reactors, stadiums, research laboratories, etc.

10. Clifford T. Stewart and John W. Hartley, "Financial Aspects of Interinstitutional Cooperation: Unit Costs in Cluster and Non-Cluster Colleges," Claremont, Calif., June, 1968.

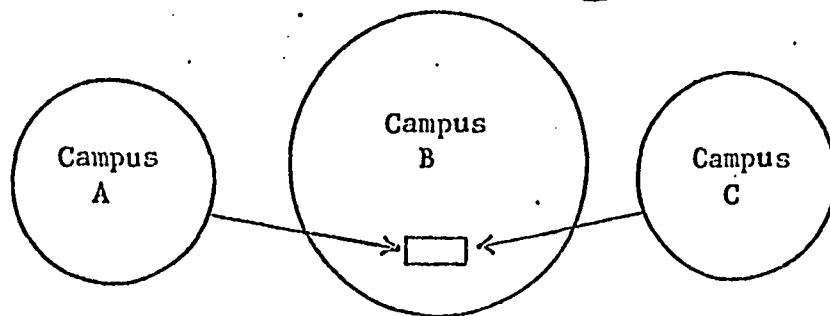
CENTRAL FACILITY:



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SINGLE-OWNER FACILITY:



2. An Inventory of Current Facilities Sharing Arrangements Among California's Institutions of Higher Education

An analysis of the prospects for and potential benefits from the increased sharing of facilities among California's public and private institutions of higher education must rest in some measure on the extent of such sharing at present. Prior to this study, however, there has been no systematic collection of data as to the extent and frequency of interinstitutional cooperation and facilities sharing in California. Interinstitutional cooperation, as such, has not been the subject of special study by the Council nor of particular interest to campus and segmental administrators, apart from a few relatively isolated cases. It has been necessary to start from scratch to prepare a statewide inventory of facilities sharing.

For the purposes of this study it seemed most useful to approach the problem in two ways. The first was to identify and then examine closely the three or four outstanding examples of facilities sharing which, although isolated cases, provide the most extensive evidence of the costs and benefits, the problems and the achievements of formal joint-use arrangements. As they are relatively few, the selection was not difficult. The examples selected were: the Moss Landing Marine Laboratories, the San Francisco Consortium, the Claremont Colleges, and the joint doctoral programs of the University of California and the California State Colleges.

Second, it was decided to survey each of the Community Colleges, State Colleges, University campuses, and the private colleges and universities to obtain a rough measure of the extent and impact of facilities sharing statewide. Although this might have been done by means of a comprehensive and detailed questionnaire backed by follow-up visits to each campus, such an approach was rejected in the belief that it would require much more time and expense, particularly for campus administrators, than the results of the study were likely to warrant.

It was decided instead to conduct a much less detailed survey, one which would not necessarily produce data on every single example of direct and indirect facilities sharing but which would identify the most significant instances of sharing based upon the judgement of campus officials. Accordingly, the chief administrative officers of each Community College and each private institution, and of each University and State College campus were asked, through their statewide offices, to provide the following elements of information regarding what they identified as significant examples of facilities sharing in which their campuses participate:

- (1) Participating institutions and locations: participating private colleges and universities, University of California campuses, State Colleges, Community Colleges.

- (2) Facility: e.g., library, research laboratory, teaching lab, field station, cafeteria, administrative offices, galleries, theaters, athletic facilities, etc.
- (3) Function: Teaching, research, extension, other public services, administration, supporting services or activities, or some combination.
- (4) Participants: Students, faculty, administrative staff, or some combination.

It was emphasized that the survey did not require extensive detail, but only enough information to afford a reasonably complete picture of the extent to which each campus is involved in joint-use arrangements and to provide a basis for selecting the most significant examples for further study.

The results of the survey are summarized beginning on page 26. From the responses received, several specific examples were selected for closer study to determine whether they merited more detailed description and analysis as major examples of facilities sharing comparable to the four known examples described beginning on this page. Upon closer examination, however, none of those so selected did appear to merit further discussion in this report. In several other cases upon closer examination the amount of facilities sharing did not prove to be as important as first indicated.

A. Outstanding Examples of Facilities Sharing

These examples demonstrate that there are indeed several very important facilities sharing arrangements among California's institutions of higher education and that such sharing can produce substantial benefits. There are relatively few of these examples, however.

Moss Landing Marine Laboratories

The Moss Landing Marine Laboratories offer an excellent example of the manner in which a number of campuses within one segment can join together to establish and operate a satellite instructional facility which none could justify or fully utilize separately. Although in operation for only a few years, and still subject to a number of uncertainties as to funding and instructional objectives, it has developed a program of unusual strength in a short time.

Moss Landing Marine Laboratories are a marine science facility for instruction and research operated by five of the California State Colleges and located at Moss Landing on Monterey Bay. The laboratories were originally established as a private biological research station. The facility was purchased by the foundations of the five State Colleges -- San Jose, Fresno, Hayward, San Francisco,

and Sacramento -- in 1966 with the assistance of a National Science Foundation Grant. It was then given as a gift to the State College Trustees. Acceptance of the gift was approved by the Coordinating Council on June 29, 1965, with the understanding that the facility would serve primarily as an "interdisciplinary and intercollegiate instructional center for the marine sciences" and that any expenditures of research as well as any additional capital outlay costs would not be supported from State funds.

In July of 1969, the Council, after reviewing the history and operation of the facility, called for removal of the initial fiscal restraints on the use of State funds and declared that ". . . despite strict budgetary limitation through the development of a consortium in which five state colleges use and support the laboratories . . . Moss Landing Marine Laboratories is firmly established as an important marine sciences center in California." The Council also stated that the station ". . . has shown that consortium operation of specialized facilities is feasible and practical . . ."¹

The current program at the facility includes instruction, research, and other public service. The instructional program consists of twenty-seven courses (up to 85 units) of upper division and graduate work in marine biology and marine geology, with occasional offerings in marine aspects of meteorology, chemistry, geography, and engineering. Total enrollment in the fall term, 1970, was eighty students distributed as follows:

	<u>Individuals</u>	<u>FTE</u>
Hayward	17	4.7
Fresno	23	13.0
Sacramento	2	.8
San Jose	32	13.6
San Francisco	<u>6</u>	<u>2.7</u>
	80	34.8

Of the eighty students, seven were juniors, twenty-one seniors, and fifty-two graduate students; forty-three enrolled for more than 6 units while thirty-seven were enrolled for 6 units or less. Total units attempted amounted to 522.3.

Enrollment is open to "properly qualified" upper division and graduate students who have matriculated at one or another of the five participating colleges with program approval from their college academic advisors. Students register and pay fees at their college, but special arrangements have been made for students to register at Hayward if they are to enroll during the summer, so as to take advantage of the fact that Hayward offers a State-supported summer quarter. Students, especially those from distant campuses, are encouraged to attend full time.

1. Agenda, Coordinating Council for Higher Education, July 15, 1969.

The instructional faculty is drawn from all five participating colleges, but the majority are from San Jose State College. The current distribution of full and part-time faculty is; San Jose, eleven; San Francisco, four; Hayward and Fresno, two each; and Sacramento, one. A curriculum policy board made up of two faculty members from each campus, one in biology and one in geology, plus two members of the laboratories staff, oversees the instructional program.

The staff and students at Moss Landing also undertake a variety of research projects for public and private agencies which are generally "supportive of the educational goals of the California State Colleges, providing opportunities for students to apply their scientific training to real problems. . . ." These include fishery studies, water quality analysis, study of bay currents and ecology, and geological mapping of the bay. Moss Landing has received funding for a Sea Grant project from the Office of Sea Grant Programs of the National Science Foundation to undertake environmental studies of Monterey Bay and the Central California Coastal Zone.

Other public-service activities include dissemination of interpretative information on marine resources and ecology, provision of data and bibliographic resources to interested persons and agencies, and assistance to science teachers within the region.

Administration of the facility is in the hands of a director who is directly responsible to the president of San Jose State College. The director "receives guidance" from a twelve-member policy board of which he is a member along with one administrator and one member of the science faculty from each of the five colleges and the San Jose business manager. This board meets four to six times each year and is said by the present Director, Dr. Robert E. Arnal, to be an active and interested body.

The business management functions for the center have been assigned to San Jose State College, which is responsible for the details of maintaining the facility. The center's administrative costs are provided through San Jose's budget. For 1970-71 this is to amount to approximately \$53,000 for 3.7 positions and operating expenses. Each of the supporting colleges contributes to instructional expenses in proportion to the enrollment of its students. Instructional costs are expected to be about \$125,000 for 1970-71.

San Francisco Consortium

Consortia have proven to be one of the principal forms for interinstitutional cooperation for a wide variety of purposes, including the joint use of facilities. Although a recent report indicates that there are as many as sixty-one functioning multi-purpose consortia of higher education institutions throughout the country (as well as a great many more single-purpose consortia),

there is only one in California which is active, the San Francisco Consortium.²

The San Francisco Consortium was initially formed in 1966 by a group of faculty and staff representing five of San Francisco's institutions of higher education: City College of San Francisco, San Francisco State College, the University of San Francisco, Golden Gate College, and the University of California, San Francisco. Lone Mountain College (formerly San Francisco College for Women) and Hastings College of the Law joined in 1969 and 1970.

In the words of one of the founders, Dr. Malcolm S. M. Watts, the Consortium's purpose is ". . . to become the instrument through which the resources of the major educational institutions are brought more effectively to bear upon the unsolved problems of the modern urban environment." In doing so, he believed it would also make it possible to improve and strengthen the instructional, research, and other public service programs of the participating institutions through ". . . appropriate coordination, exchange, or joint ventures."

The Consortium was incorporated in 1967, and a Board of Trustees was formed, consisting of the president and two other representatives of each of the five original member institutions. The Consortium began operating with a full-time executive director in February, 1968.

The Consortium has become active in four fields over the past three years. First, it has sought to uncover and encourage the development of areas of cooperation among the participating institutions -- e.g., with regard to library resources, extension programs, the potential for a downtown center, and student financial aid. Second, with a grant of \$360,270 from the Ford Foundation, which was received in December, 1969, it is supporting an effort to develop and expand interinstitutional programs to serve economically disadvantaged students in the city. Another foundation grant, this in the amount of \$40,173, is to be used to begin planning the establishment of an Early Childhood Education Center in the city's Western Addition. And, fourth, a local grant of \$40,000 is to be used to finance an initial inventory of San Francisco's

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2. There is also a Greater Los Angeles Consortium, but it has few activities at present and no longer appears to qualify as a functioning multipurpose consortium.

Imperial Valley College and Southwestern College in San Diego County are two of six members of a proposed new consortium of small southwestern colleges which has applied for a federal grant under Title III of the 1965 Higher Education Act for developing institutions. Of the other four members two are in Arizona and two are in Texas.

urban problems and preparation for the development of a data resource bank on all aspects of urban life in San Francisco.

Initial financial support for the Consortium was provided by three local foundations. In the second year of operation each of the five original member institutions contributed approximately half of the Consortium's \$50,000 operating budget. In 1970-71 a formula which set member contributions according to their relative financial abilities produced nearly \$40,000, or about two-thirds of the operating budget, aside from special projects. Foundation grants have totaled \$405,270 for this fiscal year, including the \$360,270 Ford grant.

The Consortium's seven-member staff is currently seeking to develop additional ways in which the seven institutions can make a coordinated contribution to their urban environment. Among the possibilities being studied is a Consortium-sponsored Institute of Urban Studies. Another is the proposed interinstitutional, multipurpose downtown campus which San Francisco State College has been particularly interested in establishing. If an appropriate facility can be found, such a center, bringing together instructional programs at the lower division, upper division, and graduate levels in which each participating institution could make a major contribution, represents, potentially, one of the most exciting plans for interinstitutional cooperation and facility sharing advanced anywhere in the country.³

The Claremont Colleges

The Claremont Colleges provide a unique illustration of the manner in which a cluster of individual institutions can be developed, sharing those facilities which would be too costly to develop for each but otherwise maintaining a high degree of autonomy and preserving certain differences in instructional emphasis. As the Claremont Colleges are well known in California and throughout the country, their history, development, and present programs can be noted briefly and greater attention given to the form and content of their cooperative operations and the extent to which facilities and other resources are actually shared.

History. In 1925, James A. Blaisdell, President of Pomona College, announced a plan for the development of a group of private, residential, liberal arts colleges of limited enrollment to be built on adjacent campuses but to share certain basic facilities and resources. It would be, he said, ". . . a group of institutions . . . around a library and other facilities used in common . . . to

3. More recently those interested in the center have begun a drive to raise funds privately to build a tuition-supported adult instruction facility carrying the name of the President of San Francisco State College.

preserve the inestimable personal values of the small college while securing the resources of a large university." The Claremont Colleges, the name given to this plan in 1962, now includes six institutions: five undergraduate colleges -- Pomona, Scripps, Claremont Men's, Harvey Mudd, and Pitzer -- and Claremont University Center, which operates Claremont Graduate School and administers the jointly used facilities and services.

Following the announcement of Blaisdell's plan, Scripps College was founded in 1926, and planning was begun for Claremont Men's College (CMC), which was founded in 1946. Nine years later, Harvey Mudd College was opened, and eight years after that, in 1963, Pitzer College was founded. In the meantime the graduate school, which until 1935 consisted of the education faculty and three other staff members, grew slowly to its present size of forty-five full-time faculty (plus others drawn part time from the colleges) and obtained its own president. During this period the central services for the cluster also grew slowly as new facilities were added and various administrative structures were tried. Although the graduate school and central services are presently combined under the office of the President of the University Center, it has recently been decided to establish a new executive position to administer the central services, thus relieving the graduate school president of this burden.

Of the total land owned by the six institutions, only about two-thirds is developed; one-third is available for the development of additional colleges. It is anticipated that within the next ten years, as financial backing permits and enrollment pressures require, a sixth undergraduate college will be begun. It has been a basic policy that there will be periodic additions (every ten to twenty years) to the number of colleges in the cluster, rather than an increase in the enrollment of the existing campuses past the point judged to be optimal for "quality" teaching and learning.

Present Program. The present enrollment of the six institutions is 4,345 students. The faculty is 421 in number. In June, 1968, the six institutions awarded 928 degrees, of which 310 were graduate degrees and 610 were baccalaureate degrees. Pomona College, which is coeducational, enrolls 1,272 students and offers a full range of undergraduate study in the social sciences, the physical and biological sciences, and the humanities. Scripps College enrolls 493 female students in five principal fields: the arts, languages and literature, social studies, philosophy and religion, and science. The science program is shared jointly with Claremont Men's and Pitzer Colleges.

Claremont Men's College enrolls 760 male students and emphasizes economics and political science with majors in the humanities, social sciences, and physical sciences. Harvey Mudd College, the smallest of the five undergraduate campuses with a coeducational enrollment of 292 students, places emphasis upon the physical sciences and

engineering, with majors in physics, chemistry, mathematics, and engineering. Pitzer College, the most recently founded, enrolls 560 female students and emphasizes the "social and behavioral" sciences with a total of nineteen fields of concentration.

The Graduate School, founded in 1925, is coeducational and enrolls 968 students at present. Master's degrees are offered in nineteen fields and doctorates in twelve.

Joint Administration and Operation. In discussing the manner in which the six Claremont institutions cooperate in the administration and operation of joint services, it is important to keep in mind that these are five basically autonomous institutions (the graduate school's status is not as clear) which came together voluntarily for various purposes. Many of those who have written about cluster colleges have obscured this very important difference between the Claremont Colleges and, for example, UC Santa Cruz. Whereas the Claremont Colleges are essentially individual institutions which have agreed to cooperate in various matters, the UC Santa Cruz structure is basically that of a single central institution with sub-units which are granted a limited degree of self-governance and independence of operation.

Although it is important to the Claremont Colleges that they are immediately adjacent to one another and that they do cooperate in a number of very important activities, it is not essential that each college participate in every cooperative arrangement. The fact is that in several areas only two or three or four of the institutions have agreed to undertake joint programs or to jointly support a particular service.

The principal common central services now include health services, heating and power, the library, campus shops, security, maintenance, telephones, institutional research, facility inventory, personnel and purchasing, the psychological counseling center, and theater facilities. In addition, CMC and Harvey Mudd have a joint admissions office and a joint athletic program. CMC, Scripps, and Pitzer operate a joint science program in biology, physics, and chemistry in jointly owned laboratories. Harvey Mudd and Pomona provide an astronomy program which serves the other three colleges as well.

In 1967 the six institutions adopted a constitution which outlines the objectives of the combined institution, the role and functions of the University Center as the central coordinating institution, the basic role and maximum size of each of the member colleges, the governing bodies and coordinating committees, and procedures for adding new colleges. The objectives are stated in these terms:

1. To develop and maintain at Claremont, California a center of undergraduate and graduate learning made up of independent undergraduate colleges of liberal

- arts and sciences, cooperating with each other and with a central coordinating institution;
2. To provide in the undergraduate colleges the personal instruction and the other educational advantages inherent in the small college;
 3. By common action through and with the central coordinating institution to provide physical facilities and educational advantages, including graduate study and research, of the character found in universities of highest quality;
 4. To provide academic interchange between the undergraduate colleges and between the undergraduate colleges and the graduate school, including the interchange of faculty between the graduate school and the undergraduate colleges; and
 5. To maintain undergraduate colleges of limited enrollment, and to found and develop new member colleges as sound educational plans and new resources make practicable.

Under the terms of this constitution, the University Center's governing board, the Board of Fellows, includes, among others, the board chairman, president, and one other representative from each undergraduate college. (These college representatives must constitute more than one-third of the total board membership.) This board elects the president of the University Center. An Administrative Council, which consists of the presidents of the member colleges, supervises the administration of the common facilities that are supported by joint budgets and is responsible for the development and supervision of joint educational planning and programs. The council is authorized to appoint inter-college committees to carry out these responsibilities. The chairman of the council (one of the presidents) is the Provost of the Claremont Colleges. Finally, there is a Claremont Colleges Board of Overseers, which has advisory powers only.

Although there have been several changes in the administrative structure in recent years, it is still basically true that governance of the Claremont Colleges is "a matter of group consent."⁴

Operating Costs: In an attempt to assess the operating economies of the cluster-college concept, the Claremont Colleges undertook in

4. Louis T. Benezet, "College Groups and the Claremont Example," Emerging Patterns in American Higher Education, p. 199.

1968 to compare the costs of the Claremont institutions with a selected group of eighteen other institutions believed to be comparable in purpose and character with one or more of the Claremont institutions.⁵ The cost comparisons were based upon a three-year average in most cases, and each area in which the Claremont Colleges operate joint services was considered separately. In general, the study demonstrated that the Claremont Colleges as individual institutions enjoyed significantly higher levels of service from comparable expenditure levels for the library, business office, and health and medical services than the institutions with which they were compared. However, the authors of the studies also emphasized that their work was based upon very limited data and that more extensive studies of this type are needed if the potential savings of the cluster-college structure are to be fully understood.

Joint Doctoral Programs

Doctoral programs offered jointly by a California State College and a campus of the University of California represent, in their concept, an excellent example of the manner in which the instructional resources (including faculty resources) of two institutions can be shared so as to expand educational opportunities for students with a minimal increase in costs. As conceived by the Master Plan Survey Team in 1959, the joint doctoral programs are intended to provide a device for gaining increased utilization of faculty talents for doctoral training on State College campuses without the necessity of building the costly facilities and organizational structure which would be necessary in the absence of University support. The joint doctorates were to become an intersegmental bridge for the benefit of students, faculties, and the institutions generally.

In practice, however, these benefits have been spread rather thinly. By the end of 1970, ten years after the drafting of the Master Plan recommendation, there were only five joint doctoral programs in operation: a San Francisco State-UC Berkeley program in special education, a San Diego State-UC San Diego program in chemistry, a San Diego State-UC Berkeley program in genetics, a San Diego State-UC Riverside program in ecology, and a Cal State, Los Angeles-UCLA program in special education. Authorized State College expenditures, enrollment, and staffing for the five programs, excluding University contributions, are reported to be as follows for fiscal year 1970-71:⁶

5. Stewart and Hartley, Financial Aspects of Institutional Cooperation: Unit Costs in Cluster and Non-cluster Colleges. 19691
6. Provided by the Office of the Legislative Analyst. According to the Analyst's staff the University of California has never reported its share of costs for joint doctoral programs.

	<u>Individual Student Enrollment</u>	<u>State College Faculty Positions</u>	<u>Total State College Expenditures</u>
S.F. State-UC Berkeley Special Education	16	4.0	\$ 55,855
CSC L.A.-UCLA Special Education	14	7.0	98,006
CSC San Diego- UC San Diego Chemistry	17	11.1	174,496
CSCSD-UC Berkeley Genetics	4	11.1	174,496
CSCSD-UC Riverside Ecology	4	11.1	174,496

Although a total of fifty-five students are now enrolled in these five programs, only one joint doctorate (in chemistry) has been conferred to date. According to State College officials, this is explained by the fact that it took until 1965 to begin the first program and that financial support remained "minimal" until 1968-69. They expect eleven doctoral candidates to complete their work this spring.

The increasingly stringent State-support allocations to the State College and University systems, however, and nationwide efforts to cut back graduate enrollment in the face of an apparent over-supply of doctorates may place even this very modest level of activity in jeopardy. Despite the merits of the concept, its high costs and slow implementation, together with the pressure within each segment to divert funds to other activities and programs, do not make the joint doctorates very promising examples of potential interinstitutional cooperation and facility sharing in the foreseeable future.⁷

7. "The slow development of this program is clearly related to the circumstances of its origin and to the fact that the Coordinating Council has not strongly supported it. The joint doctorate was created basically as an expedient solution to the pending crisis, not for any advantages over the traditional arrangements for doctoral programs. A stop-gap measure used by the university to retain exclusive jurisdiction over doctoral study, it attempted to placate the state colleges without actually giving them full authority to grant the higher degree." Palola, Lehmann, and Blischke, Higher Education by Design: The Sociology of Planning. Center for Research and Development in Higher Education, Berkeley, California, p. 124.

Nevertheless, two additional joint doctoral programs are in the development state: a joint doctorate in public administration sponsored by San Diego State College and the University of Southern California and a joint doctorate in botany sponsored by Chico State College and UC Davis. The San Diego-USC program is the first to be proposed under a 1969 amendment to the Education Code which extended authorization for joint doctoral programs to include those developed between a California State College and a private institution accredited by the Western Association of Schools and Colleges.

B. Other Reported Facilities Sharing

The following examples of facilities sharing have been drawn from the campus-by-campus survey. Although these do not represent all facilities sharing among California's institutions of higher education, they do represent the range of such sharing and, in all probability, the greater part of that which is more than simply ad hoc, informal, and transitory.

(1) Instructional Facilities

UCLA provides a dental hygiene laboratory for use by Los Angeles City College on a lease basis. Some fifty students from Los Angeles City College receive instruction under this arrangement.

Chapman College in Orange has located a large spectrophotometer, for which it does not have sufficient space, on the California State College, Fullerton, campus with the understanding that it will always be available to Chapman students and faculty.

Citrus College permits students from neighboring Azusa-Pacific College to enroll in lower division courses which are not offered at the latter. Like several other Community Colleges, it also provides student teaching and field-work stations for teaching and counseling students from State Colleges in the area.

Butte College in Durham shares in the use of Chico State College's farm for instruction in agriculture.

Chico State College offers bachelor's degrees in Redding (70 miles to the north) by teaching upper division courses on the Shasta College campus located there.

Reedley College and Fresno City College conduct a joint vocational nursing program for which there is sharing of lecture and laboratory rooms on the two campuses.

American River College students are permitted to make limited use of the University of Pacific marine research laboratory at Bodega for two courses.

The UC Bodega Bay Marine Laboratory is operated and used for teaching and research by all of the UC campuses in much the same manner as other UC research stations,

The Ventura Consortium operates an 85 foot ship owned by Occidental College for marine biological research and teaching. Members of the consortium are Occidental; Cal Tech; Cal State, Fullerton; Pomona College; San Fernando Valley State College, and UC Santa Barbara. Seven other public and private institutions which are not members have also arranged to use the vessel which accommodates twenty-five to thirty persons on day voyages.

The UC San Francisco Medical Center makes its facilities available for projects of master's degree candidates at San Francisco State College and also opens certain classes to State College students.

Pacific Oaks College offers cooperative M.A. programs with Whittier College in sociology, and in education with the Claremont Graduate School. Students may enroll at either campus but must be accepted by both. They use the facilities of each institution. Pacific Oaks also offers a cooperative M.A. in human development, with an emphasis on emotionally disturbed children, with Cedars-Sinai Medical Center.

UC Santa Cruz and Stanford University offer a joint graduate program in earth sciences.

California State College, Fullerton, cooperates with Claremont Graduate School in offering graduate instruction in school administration and in a school administration internship program.

Humboldt State College operates a cooperative law enforcement education program with the College of Redwoods, using the latter's facilities to provide 10 units of upper division credit to approximately twenty students.

The biology department at California State College, Long Beach, has access to the Catalina Marine

Biological Station operated by the University of Southern California.

Sacramento State College reports that "some random use" has been made of specialized research facilities at UC Davis by its science classes by arrangement between the two faculties.

The Nursing Department at Cal State, Los Angeles, uses the facilities of five Community Colleges for observation and practice teaching. The School of Education has similar arrangements, as do most of the education programs in the State Colleges.

There are many arrangements under which individual faculty members have access to equipment at other institutions, particularly in the case of high-cost equipment purchased with a grant from NSF, which often requires joint use. For example, members of the Cal State, Los Angeles, chemistry department use various facilities at Cal Tech's Jet Propulsion Laboratory, and a large spectrometer at Cal State, Los Angeles, is similarly available for use by faculty of other institutions.

The Marine Science Department at San Diego State College makes limited use of the Scripps Institution of Oceanography, primarily for field work.

San Francisco State College entered into an agreement with the California Academy of Sciences in 1967 which provides for sharing of faculty, research collections, graduate students, and certain staff. San Francisco State College uses Academy staff to teach courses, while the Academy employs State College graduate students in its research projects. The college reports that it has requested but has so far been denied additional State support to expand this cooperation.

(2) Extension

The University of California (University Extension) and the individual State Colleges frequently obtain space from Community Colleges for their off-campus extension courses. Among the Community Colleges which provide at least one classroom (evenings or weekends) are; College of San Mateo, Cabrillo, San Joaquin Delta, Pasadena, College of the Siskiyous, Los Angeles Valley, Sacramento City, American River, Santa Rosa, Victor Valley, Los Angeles City, Bakersfield, and Shasta.

(3) Libraries

Many institutions report interinstitutional loan agreements, both within their systems and with other colleges and universities, with varying degrees of usage. Several campuses, including UC Davis, report "heavy use" of such agreements.

UC Berkeley provides dead storage stack space to the UC San Francisco library within the inter-campus library storage facility in Richmond.

Victor Valley College opens its library to students from Chapman College's off-campus center at George Air Force Base and grants them borrowing privileges.

California State College at Fullerton reports that it has an agreement with UC Irvine giving students and faculty of each institution "full library use privileges" at the other. It has a similar agreement with Chapman College.

Cal State, LA, has instituted an interlibrary delivery system with UCLA to facilitate book borrowing by Cal State, LA, faculty who have borrowing privileges at UCLA.

Humboldt State College offers library borrowing privileges to students from the College of the Redwoods.

The California State Colleges are attempting to improve their interlibrary loan service by liberalizing the standard loan policies and extending the use of the service to larger numbers of students. The State Colleges have also agreed recently to produce a limited number of copies of library materials without charge in lieu of interlibrary loans. The State Colleges in southern California are developing a joint newspaper "back files" project. The project calls for a cooperative acquisition policy, with each institution assigned responsibility for acquiring complete microfilm files of specific papers (such back files may cost up to \$12,000 for purchase alone). Most of these plans are still in the study stage, however.

California State College at Fullerton reports that it has agreements with UC Irvine and with Chapman College giving students and faculty full library privileges.

(4) Computer Facilities

California Institute of Technology, through what is known as the Southern California Regional Computing System, shares its computer center with ten other institutions; California Lutheran, The Claremont Colleges (six institutions), LaVerne College, Occidental College, and the University of Redlands. This is accomplished by means of telephone lines linking Cal Tech's PD-10 computer with terminals on the other campuses. The system is used on a time-sharing basis by students, faculty, and administrators to supplement the computer facilities which each of the other institutions owns. The system is intended to provide programming, computing, and data storing for instructional use twenty-four hours a day.

Orange Coast College shares its computer through remote terminals with Golden West Community College, UC San Diego, and Long Beach State.

Stanford University has an agreement with Napa College which permits students and faculty at that college to use Stanford's computer center.

Contra Costa College students are taught computer programming using remote terminals tied into the UC Medical Center computer.

Riverside City College obtains about fifty hours per year of computer time from UC Riverside's facility to provide computer programming instruction for twenty-five students.

Reedley College reports that it shares the use of a computer facility with Fresno City College, using about 11 percent of the available time.

UC Santa Cruz and Cabrillo College cooperate in the use of the UCSC computer center, including a conference room, key punch room, and machine room. Cabrillo College students take a year course for 3 credit hours in computer techniques taught by two UCSC staff members, who meet with twenty-five Cabrillo students at night twice a week.

UC Berkeley has service contracts with San Francisco State, Sacramento State, San Jose State, Sonoma Community College, University of San Francisco, and the College of the Holy Names to provide computing services on a "batch" basis.

Los Angeles City College provides computer time to the other Community Colleges in the Los Angeles district, with East Los Angeles and Los Angeles Southwest Colleges the principal users.

The California State Colleges have established two regional computer centers; The Southern Regional Data Center located on the Cal State, Los Angeles, campus and the Northern Regional Data center located on the San Jose Campus. These EDP service centers are intended to serve some or all of the computer needs of the State Colleges in each region, including the needs of the new common admissions program.

Chico State College has an informal arrangement to provide limited computer services to Butte Junior College.

The faculty of the biological sciences department at Cal Poly, Kellogg-Voorhis, has access to electron microscopes and other laboratory equipment at UC Riverside and at Cal State, Los Angeles, for research.

(5) Television Broadcasting

The Television Consortium of Bay Area Community Colleges cooperatively schedules televised instruction for credit using the facilities of KCSM-TV of the College of San Mateo. The other participating colleges are Canada, Chabot, DeAnza, Ohlone, San Jose City, and Skyline.

Coast Community College District is preparing an open circuit television broadcasting facility to be located on the Golden West College campus but for use by all institutions of higher education in the areas, including UC Irvine; California State College, Fullerton; Chapman College; Southern California College; Santa Ana College; Cypress College; and Saddleback College.

(6) Athletic Facilities

Orange Coast College, which has a "complete plant," shares its athletic facilities with Golden West College, the more recently established second college in the district. The football stadium, gymnasium, and auditorium have been shared for the past five years. Golden West is soon to acquire its own gymnasium but plans to continue to use Orange Coast's stadium and auditorium.

Sonoma State College, which has no lights on its stadium at present, has used the Santa Rosa Community College stadium for several night football games.

West Valley Community College, which has no football stadium of its own, has used San Jose City College's stadium for the past four years.

Cabrillo College makes its intramural fields available to UC Santa Cruz and to Bethany Bible College.

The College of the Holy Names in Oakland opens its swimming pool to Laney College for instructional use six hours each week. Three instructors and approximately ninety students from Laney use the pool.

Mt. San Antonio Community College permits Cal Poly (Pomona) to use its football stadium, and several nearby colleges use its cross country course.

San Joaquin Delta College, which adjoins the University of the Pacific (having begun in 1935 as the lower division of the College of the Pacific) uses UOP's stadium for football games, and the two institutions exchange use of their intramural practice fields on an informal basis.

Cal State, Los Angeles, occasionally uses the East Los Angeles College stadium for football games.

Cal Poly, Kellogg-Voorhis, opens its gymnasium and football field to local high schools for their games.

(7) Research

Chico provides special crop testing plots on its farm for use by the agricultural department of UC Davis. It also operates and maintains frost recording equipment owned by UC Davis.

San Francisco State College's Marine Biology Department has access to an electron microscope at UC's Bodega Bay Station which it uses for faculty and graduate student research.

The University of California operates ten field stations and three experimental areas which are

available for agricultural research by University faculty and graduate students who need a specific local environment for their work.

(8) Interdistrict Attendance

Many Community Colleges are party to active inter-district attendance agreements which permit students to cross district lines in pursuit of their educational objectives. Although these agreements do not ordinarily fall within the scope of a study of joint facilities usage, they are closely related, particularly in two circumstances: (a) when students are permitted to cross district lines to enroll in high-cost (low-enrollment) classes for which there is inadequate justification within each of the participating districts, and (b) when students are permitted to attend the Community College nearest to their residence, regardless of district lines, in lieu of the construction of a new campus or campuses for that purpose. As an example of the latter, the Trustees of the San Jose and West Valley Community College Districts have agreed to permit students from one district to enroll on the campus of the other if it is nearer to their homes. This is reported to be not only a convenience to the students but also a way to delay construction of a third college in each district for a considerable period.

(9) Miscellaneous

Students from La Verne College attend events sponsored by the Claremont Colleges Artist Series under a contractual agreement.

UC Santa Cruz makes some limited use of nearby Cabrillo College's theater for conferences and film programs.

Citrus College is developing plans with neighboring Azusa-Pacific College to provide for special programs for Azusa-Pacific students in Citrus's new 1500-seat auditorium.

UC Davis offers the use of its Crocker Nuclear Laboratory to faculty and graduate student researchers on a contract basis, as required by the Atomic Energy Commission, which provided the cyclotron and related equipment.

UCLA makes limited use of the agricultural research facilities of UC Riverside. UCLA also shares in the use of its cyclotron with USC and UC Santa Barbara.

In summary, the survey has revealed a wide range of facilities sharing involving a substantial number of California's institutions of higher education. It has also revealed, however, that there are relatively few examples of facilities sharing which involve more than a few students, faculty or administrators and other than marginal use of available facilities. Interestingly, among the institutions surveyed, twenty-six Community Colleges, two University campuses, three State Colleges, and ten private institutions, reported no significant sharing apart from minimum allocations of classrooms for extension courses.⁸

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8. Excluded from this summary are reported examples of campus-community sharing, which, although certainly important (especially among the Community Colleges) as ways in which campus facilities are put to maximum use, nevertheless fall outside the scope of this study.

3. Examples of Interinstitutional Cooperation in Other States¹

Before going further with the analysis of the potential for an increase in facilities sharing among California's institutions of higher education, and possible methods of encouraging greater cooperation, it will be useful to look briefly at some of the forms which interinstitutional cooperation has taken in other states.

In general, interinstitutional cooperation appears to be more advanced elsewhere in the country, particularly in the midwestern and the northeastern states. In part this may simply reflect the fact that there has been less development in those states in the formation of statewide systems of public higher education linking institutions of similar purpose and stature. The absence of such systems may have made the need for interinstitutional cooperation greater, and it may also have made it easier for individual institutions to cooperate.

But whatever the reasons, there is much to be learned from what has (and has not been) accomplished in other states. As evidence for this, the following brief descriptions of several outstanding examples of interinstitutional cooperation in other states are provided. The majority of these arrangements involve a substantial amount of direct and indirect sharing of facilities; a few have been included, however, which on close examination appear to be little more than paper arrangements with very limited accomplishments.

New England Library Information Network

The New England Library Information Network (NELINET) is composed of six state university libraries in New England which have formally agreed to seek ways to cooperate for their mutual benefit.² The agreement is administered by the New England Board of Higher

1. One very important project which is not included here because it does not involve the sharing of facilities in any significant way is the Higher Education Management System (HEMS), a project sponsored by the Western Interstate Commission for Higher Education (WICHE). This project, in which the University of California has played a leading role and in which the Council's staff also participates, has as its objective the preparation of a single management data collection and reporting system for use by all interested institutions of higher education in each major area of their activity. Although not directly pertinent to this study, WICHE/HEMS, when completed, will represent one of the most significant accomplishments of interinstitutional cooperation in management to be found anywhere.
2. The five cooperating institutions are the Universities of Connecticut, Massachusetts, New Hampshire, Vermont, and Maine.

Education and currently involves cooperative activities in the acquisition and joint use of research materials, the development of interlibrary communication and the cataloging of joint holdings.

The most ambitious project which NELINET has undertaken is the establishment of a regional, computer-based library service center for cataloging, book acquisition (searching, order control, processing, and acquisitions accounting), catalog publication, circulating and interlibrary loan control, and library management information. Although initially established to serve the six state universities, the NELINET service center is designed to serve, eventually, any New England library, public or private, academic or special purpose, which may wish to join. The design of the system provides capacity for at least sixty-four "large" libraries. For the libraries which join, the NELINET center will provide the use of a computer facility dedicated solely to library use and an opportunity to share in the use of a machine-form catalog, something which none alone could afford on its own.

College Center of the Finger Lakes

The College Center of the Finger Lakes, incorporated in 1961, now has ten members located within a 140-mile radius of Corning, New York. They are Alfred University, Cazenovia College, Corning Community College, Elmira College, Hartwick College, Hobart and William Smith Colleges, Ithaca College, Keuka College, Wells College, and St. Bonaventure University. The Center has three principal objectives:

- (1) To develop cooperative programs to assist the member colleges to achieve their individual objectives more economically and effectively;
- (2) To develop cooperative programs which are beyond the means or abilities of the individual colleges; and
- (3) To promote cooperation among other educational and cultural institutions in the area in educational programs beneficial to the area.

The Center is governed by a board composed of the president and a "lay representative" of each member institution. Among the Center's current programs are an ecology institute for school teachers sponsored by the National Science Foundation; a Consortium Research Development program in education sponsored by the US Office of Education; the Corning Graduate Center, which offers graduate and noncredit work in business administration, education, English, and engineering; and an Institute for Limnological Studies. In addition, the Center has served as sponsor for several recent meetings and studies regarding the development and objectives of interinstitutional cooperation.

The Five Colleges

The Five Colleges are Amherst, Smith, Mt. Holyoke and Hampshire

Colleges, plus the University of Massachusetts -- all located no farther apart than twelve miles. Four of these institutions have cooperated in various ways for many years, but the first formal joint project was begun in 1951 with the creation of the Hampshire Inter-Library Center as a four-college depository for expensive and seldom-used books and periodicals. A coordinator was appointed in 1957, and a cooperative corporation formed in 1965 to facilitate exchanges of students and faculty and to supervise development of a joint astronomy department, several area studies programs, cooperative doctoral programs, and an educational radio station.

Clearly the most ambitious project has been the creation of the fifth college, Hampshire, by the faculty and administrators of the other four institutions. Conceived in 1958, Hampshire opened to its first students in 1970 with what has been called "instant prestige." An experimental college, Hampshire has no required courses but rather an emphasis on interdisciplinary and self-directed study. Students may take from three to six years to earn an A.B. degree. Each student passes through three "divisions" at his own pace and to graduate must have completed an individual study project and a set of examinations. In the first division the student takes courses in the three schools -- humanities and arts, natural science, and social science; in the second he concentrates in one of these three areas; and in the third he does independent work.

In these and other characteristics Hampshire College ranks as a truly outstanding example of how productive a cooperative effort can be -- in this case a large-scale cooperative effort at educational innovation.

In 1968 the presidents of the five institutions appointed a Long Range Planning Committee to review existing cooperative arrangements, assess their strengths and weaknesses, establish long-range goals, and recommend steps to achieve those goals. The Committee presented a report in 1969 calling for, among other things, a further expansion of faculty exchange programs, strengthening of area studies cooperation, formation of Black Studies Councils and two Arts Councils, a broadening of student exchange opportunities, adoption of a common calendar (4-1-4), and closer coordination of plant and program planning.

Kansas City Regional Council for Higher Education

The Kansas City Regional Council for Higher Education (KCRCHE) is one of the more ambitious and successful of the multi-purpose consortia to be found throughout the country. Founded in 1962, it now includes as members seventeen small and medium size institutions, public and private, in Missouri, Kansas, and Iowa.

KCRCHE's basic purpose is to facilitate interinstitutional cooperation for the benefit of the member institutions, their students, faculty and administrators, and the campus communities. Relying on a combination of campus initiative and consortium-staff assistance

and coordination, KCRCHE is involved in such matters as the development of a College Information System (a computerized management information system for all major elements of campus administration); interlibrary cooperation in regard to special collections, a union list of serials, and a joint-use facility for common holdings; a program of visiting lecturers and scholars for teaching and curriculum development; a cooperative urban social welfare education training and development program; and a unique intercampus telephone communication system which is used for KCRCHE committee conferences, cooperative classroom instruction, and special lecture programs.

KCRCHE has also been a leader in promoting the development of multipurpose consortia and in encouraging communication among existing consortia.

Association of Colleges of the Mid-Hudson Area

The Association of Colleges of the Mid-Hudson Area was established informally in 1963 to include Vassar, Ulster Community College, Marist College, Mount St. Mary College, State University College, and Dutchess Community College. Like many such associations, the initial decision to cooperate preceded any decision about the specific content of the cooperation. The first act, therefore, was to conduct a survey of possible areas of cooperation. This produced a number of possibilities, including cross-registration of students, joint instruction by TV, and interlibrary cooperation.

The Association incorporated in 1966 but did not employ staff until 1968. At present, its principal activities include: cross-registration of about 100 students, publication of a joint calendar of campus events, studies of the potential benefits of cooperation in computer services and the cataloging of special library resources, and a joint program for the study of the local region. The Association's activities are supported entirely from member contributions.

Committee on Interinstitutional Cooperation

The Committee on Interinstitutional Cooperation (CIC) was formed in 1958 by representatives of the "Big 10" and Chicago University, with financial aid from Carnegie, as a means of expanding opportunities in certain highly specialized areas of instruction, research, and public service. The Committee, to which each university names a top academic representative, meets three times a year to encourage and evaluate proposals for joint efforts in instruction, research, and public service. Perhaps its most important and well-known program is the CIC Traveling Scholar Program for doctoral students. Under this program qualified students in all fields of study may visit other CIC campuses to use special resources (libraries, laboratories, etc.) unavailable on their home campuses. Other activities and projects include: summer language institutes, interdisciplinary instructional and research programs, cooperative library development and administration projects, urban affairs programs, etc. A joint program in physics

has not worked out, nor has a proposed computer network; but with substantial aid from the U.S. Public Health Service, a highly integrated program of graduate study in biometerology has been achieved.

Great Lakes College Association

The Great Lakes College Association (GLCA) is made up of twelve private liberal arts colleges in three states: Antioch, Denison, Menyon, Oberlin, Ohio Wesleyan, and Wooster in Ohio; Earlham, Wabash, and DePauw in Indiana; and Kalamazoo, Hope, and Albion in Michigan. GLCA was established in 1961 with a constitution, board of directors, and support from the Ford Foundation. It is active in four fields: international education, programmed learning, science, and the humanities. Its major activities are off-campus programs in international education, but it also sponsors an arts program in New York City, an "urban semester" in Philadelphia, and a summer marine biology program at UC Santa Barbara. Most of GLCA's programs are developed according to an "agent college" concept -- according to which a single member institution (rather than a central staff) takes nearly complete authority for developing and supervising a program in which the others are then invited to participate.

Illinois Instructional Resources Consortia

This is an example of a project that failed to overcome the obstacles to interinstitutional cooperation.

One of the recommendations included in Illinois' 1966 Master Plan was that regional centers be established to enable institutions within each region to share existing instructional resources (especially equipment) and to cooperate in developing new ways to provide instruction more effectively and efficiently. Illinois, like many other states at that time, was undergoing a very rapid expansion of higher education, and it felt that every effort should be made to explore the uses of new technology to "stretch" educational resources. The vehicles for this cooperation were to be regional consortia made up of both public and private institutions.

However, when an effort was made to establish a pilot project along these lines, the large public institutions indicated that they each wanted to develop their own consortia, while the private institutions demonstrated little interest at all. As a consequence, the idea was soon abandoned.

Higher Education Center in Denver

Educators and other public officials are now working on a project in Denver, Colorado, to establish a joint higher education center for that metropolitan area. The plan is to locate two new institutions, the Metropolitan State College and the Central Campus of the Denver Community College, together with the Denver Center of

the University of Colorado, on a single campus. Working with city officials, urban renewal administrators, and the Legislature, the Colorado Commission on Higher Education has arranged for the acquisition by the State of Colorado of 160 acres of land immediately adjacent to downtown Denver. This is to be the site of a campus which will have a combined enrollment of 15,000 students by 1975, with approximately one-half of the facilities assigned to joint use. Among the joint facilities will be those for the library, performing arts, computer services, physical education and recreation, and utilities.

Each of the three participating institutions is expected to retain its present role and mission. At present these three institutions are located in buildings (mostly leased) scattered throughout the downtown area.

University Center in Virginia

The University Center in Virginia was founded in 1946 by nine institutions of higher education in the vicinity of Richmond, Virginia. Its membership now includes twenty-three public and private, sectarian and nonsectarian institutions, ranging from small private liberal arts colleges to large universities. Its dual objectives have been to strengthen the educational programs of the member institutions and to serve as an instrument for change.

The Center's principal activity has been in the form of faculty exchanges among the member campuses -- making it possible for students at one campus to benefit from the faculty strength of another. Through a "cooperative professors" program the Center has made it possible for the smaller institutions to offer courses which would otherwise be excessively expensive. This is an indirect, but nevertheless important, form of facilities sharing which benefits the larger as well as the smaller institutions.

The Center has a small staff and a president, but is heavily dependent upon cooperation from member institutions. New programs are originated or sponsored by a Projects Committee, a broadly representative group of faculty and administrators. (This committee was recently described as the "weak link" in the system and is to be strengthened by changing its membership to include more high-level campus administrators). The Projects Committee recommends the new programs to the Center's Board of Directors, which consists of the presidents of the member institutions. When a program is approved, a committee is formed to implement and supervise its operation, with the aid of the Center's staff. Member institutions are free to take part or not as they wish. Financial support is drawn from the institutions themselves and from private foundations.

Atlanta University Center Corporation

The Atlanta Center was begun in 1929 by agreement between Atlanta University, Morehouse College, and Spelman College. When

chartered in 1964, there were three additional members, Clark College, Morris Brown College, and the Interdenominational Theological Center (all located in Atlanta). The Center, like others of this type, is intended to serve as a catalyst and administrative agency for cooperative programs. Among the programs operated through the Atlanta University Center are a system of free exchange of students and a common class schedule, a joint mental health clinic, two research and administrative computers, a consolidated placement service, a science research institute, a coordinated security guard system, and a joint Afro-American studies program.

Union College - RPI Geology Program

A small-scale cooperative arrangement between Union College (enrollment: 1500) and Rensselaer Polytechnic Institution (enrollment: 4900) suggests what can be done to make the most of limited faculty resources. Union College, wishing to provide geology students a wider selection of courses than could be justified financially on its own, has entered into an agreement with RPI under which the RPI geology faculty teaches all geology courses at Union and provides student academic advisement. This arrangement has not only expanded educational opportunities at Union, but has also benefited RPI by enabling it to enlarge its more-specialized teaching staff.

Princeton University Language Program

Princeton University has for several years offered a special program in "critical" languages -- primarily those of the Middle East -- through which qualified students from other institutions can transfer to Princeton for a year of intensive language study. This allows Princeton and the other institutions to obtain relief from the burden of offering high-cost, low-enrollment language study individually, and the students can obtain the specialized instruction they seek.

Associated Colleges of the Midwest

The Associated Colleges of the Midwest, an association of twelve midwestern liberal arts colleges, operate some twenty-one cooperative programs, but the most notable is the "Argonne Semester," a program providing research opportunities for faculty and students at the Argonne National Laboratory. Under the provisions of this program, undergraduate students from the twelve colleges who are majoring in biology, chemistry, and physics can work as junior researchers at the laboratory one term. Faculty from the same institutions can work at the laboratory for up to fifteen months. (The operation of the Argonne Laboratory itself is supervised by the twenty-six member Argonne Universities Association).

The ACM was first organized in 1958 and incorporated in 1963. The present members (located in four states) are: Beloit, Carleton, Coe, Cornell, Grinnell, Knox, Monmouth, Ripon, and St. Olaf Colleges,

and Lawrence University. The board of directors is composed of the presidents of the institutions. In addition to the Argonne Semester, the association sponsors several programs in language and area studies, urban studies and teaching, and children's theater, plus several "service programs," including a "periodical bank," a unified application procedure, and a video tape exchange program. The association also operates a Wilderness Field Station in northern Minnesota for summer research and an institution in geology and biology.

In its first five years of existence, the ACM obtained approximately \$2.2 million in funding, of which 20 percent came from federal sources and 80 percent from fees, private foundations, and the participating institutions. In addition to attracting financial support, the association, according to those associated with it, has been an important source of innovation for the member institutions. Faculty members who seek to develop new teaching forms, for example, may be in a minority on their own campuses but by combining their efforts can implement programs which otherwise would not have been possible.

4. Obstacles to Interinstitutional Cooperation and Facilities Sharing

Based upon the evidence from this survey, it can be said that while there are several outstanding examples of facilities sharing among California's institutions of higher education, and many cases of cooperation on a smaller scale, major examples of facilities sharing are exceptional. Much of the existing joint use of facilities is of a very informal, ad hoc character which survives despite administrative and other pressures in the opposite direction. There are, undoubtedly, instances of significant cooperation which have not been reported in this survey, and a good deal of informal cooperation at the departmental level which could only be discovered by talking to every individual faculty member on each campus. But it must be concluded that facilities-sharing arrangements which involve more than a few students or faculty or other staff on a very limited basis are extremely rare.

Nor, apparently, are there many incentives for facilities sharing. With but a few exceptions, such sharing takes place only when (and only so long as) there is no real alternative. Even within the University and State College systems there is relatively little joint use of facilities -- because of the distance and related factors which separate the campuses, but also because the joint use of facilities is given little encouragement.

Although the 1960 Master Plan has been hailed as a significant document in the development of coordination and cooperation among institutions of higher education, it has done little to foster intercampus cooperation in the planning and implementation of instruction and research programs. As other observers have found, there has been, in fact, ". . . relative neglect of cooperative or joint academic programming between the campuses of the university and between the university and other public and private institutions in California."¹

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1. Ernest G. Palola, Timothy Lehrmann, William R. Blischke, Higher Education by Design: The Sociology of Planning, Center for Research and Development in Higher Education; Berkeley, Calif. 1970, p. 131.

Palola and his colleagues went on to observe:

Some efforts have been made to ease the transfer of students from one university campus to another, and to share library, computer, laboratory, health services and athletic, recreational and cultural facilities. However, with the exception of the Education Abroad Program and the offerings of University Extension, there are no major joint academic programs involving the mutual sharing of personnel and financial resources. Nothing was found within the University of California's structure which demonstrated innovative joint programming. (p. 131)

What are the principal obstacles in California (and elsewhere) to increased facilities sharing among public and private institutions of higher education? There are many, but most of them relate back to one or more of the following:²

(1) The traditional institutional framework of higher education which focuses upon the unified campus and which is buttressed by all the forces aimed at building institutional loyalty among students, administration, and faculty;

(2) The closely related concept of institutional self-sufficiency which drives nearly every college and university campus to meet the full range of instructional and co-curricular needs of its students without outside help, to strive to emulate the giant university as an educational supermarket;

(3) Dominance of the traditional campus concept with respect to the physical form of the institution -- a concept which not only emphasizes one-stop shopping but also establishes the campus as the "turf" of the institution which is to be defended against all potential (academic) interlopers;

(4) Interinstitutional and intersegmental rivalry (for financial support, etc.) which breeds and feeds upon notions of superiority or uniqueness or special favor among faculty, administrators, and students, alike.

2. Writing in Emerging Patterns in American Higher Education, James C. Messersmith described the basic obstacles to institutional cooperation in these terms:

In the past, it was practically possible and perhaps educationally advantageous for colleges to operate unilaterally, each determining its own purposes, goals, and programs and promoting its own resources. This unilateralism was particularly influenced by three factors (1) the ivory tower concept, which set colleges apart from the community; (2) the self-sufficient concept, which separated them from one another; and (3) the highly selective nature of single-purpose programs, which drew relatively few students to any one institution. Frequently, both the need and the desire to establish cooperative programs were lacking. Where the need existed, the benefits and potentialities of such undertakings were not always clearly envisioned.

Generally, a high regard for self-sufficiency is strongest among the chief administrative officers of the institution, the senior (in terms of tenure) faculty, and the governing board. Thus it strongly flavors almost every major policy decision; and, as a consequence, cooperative efforts which involve more than a handful of students and staff face a hard uphill fight for approval.

As has been observed elsewhere, joint instructional and research programs are difficult to establish and maintain under the most favorable circumstances. And when administrators and faculty feel strongly that their institution should maintain their supposed self-sufficiency and identity, real cooperation between campuses becomes all but impossible. Everything -- budgets, administrative procedures, alumni relations, faculty inertia, etc. -- works to reinforce the single institution point of view.

In connection with cooperative programs involving developing institutions it has been noted that serious status problems may arise:

Each institution has an image that relates to its position in the hierarchical pyramid of recognition. The institution that perceives itself to be high in "standards" and quality is always apprehensive about any move that might adulterate its position. It hesitates to admit students that are below its own students in quality or in achievement. Departmental faculties do not readily accept exchange teachers who seem to them not to be on a par in quality with their own membership.

The institution that is junior in relationship, on the other hand, may be defensive about its work and may feel sensitive if the plan is not of mutual interest. The tendency of the large university is to make of the contract a "project" as though it were part of the extension services of the university. This arrangement can lead to a minimal offering of discrete services instead of general transfusion. And the junior institution may find its position psychologically unacceptable.³

3. Algo D. Henderson, "Implications for Administration Arising from the Growing Interdependence of Colleges and Universities," Interinstitutional Cooperation in Higher Education, Lawrence C. Howard, Ed. 1967, p. 249.

Much the same can and does occur among "mature" institutions either to block a potential agreement for facilities sharing or to limit the effectiveness of an arrangement which has been agreed upon. In this case, however, the obstacles to effective cooperation can be greatest when the objective differences separating the institutions are least.⁴

Most of the available evidence also suggests that, somewhat paradoxically, there is more interest in and possibility for cooperation when there is a relative abundance of resources (and on the part of the more-favored campuses) than when resources are scarce and campuses crowded. When the campuses become crowded, (in the view of faculty and administrators) and additional space is available only for the highest priority functions, if at all, there is likely to be little thought for sharing and for interinstitutional cooperation. Space and imagination appear to become constricted under the same set of circumstances.

Nevertheless, tight budgets have produced some notable examples of cooperation and should not be accepted as an excuse for failure to explore methods and arrangements for obtaining maximum benefit from available resources through interinstitutional cooperation. According to Eldon Johnson, who has had considerable experience in this regard, many of the obstacles to cooperation arise not from conceptual problems or lack of opportunity, but simply from administrative inertia:

Although my experience may be unique, I cannot report that basic differences in institutional philosophies have been a problem or have led to problems. Rather, problems seem to result from lesser situations. It is often difficult for busy faculty and administrators to give enough time to the complications of cooperation. Unilateral decisions are always easier to make. If a problem must be referred to a faculty, the time involved may be somewhat disconcerting; but if it must be considered by the appropriate faculties of, say, five universities, no small amount of patience and persistence is needed. At all levels it is sometimes difficult for the participants to draw a sharp line between their interests within the framework of cooperation and their interest as president, dean, department head, professor, registrar, etc.⁵

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4. It is, perhaps, only among the most secure institutions, such as Harvard, MIT and Radcliff, that close instructional cooperation comes easily.
 5. Eldon Johnson, "New Collegiate Options Through Joint Action," Liberal Education, March, 1968, p. 81.

It is this inertia, this understandable unwillingness to further complicate what often seems to be a very cumbersome administrative process, which the Council must find ways to overcome if it is to substantially increase the amount of inter-institutional cooperation among California's institutions of higher education.

5. Encouraging Increased Facilities Sharing Among California's Institutions of Higher Education

Interinstitutional cooperation and joint use of facilities are never likely to attract much interest as ends in themselves. Without some additional and explicit purpose, the sharing of resources can only appear as an obstacle to institutional objectives. The joint use of facilities must instead be treated as one of several possible means for obtaining maximum benefit from available resources, maximum benefit for students, faculty, and, possibly, administrators. Moreover, it will require action rather than words to bring about a real change:

The easy repetition of cliches about more effective utilization of resources, enrichment of programs, economy of operation and institutional revitalization make glib ideology, but these abstractions are not particularly useful in leading the non-believer to accept a (cooperative higher education) center as being worthwhile.¹

It will be pointless and unproductive to simply say that the segments and the institutions should develop greater cooperation and facilities sharing in certain areas. Little is likely to be accomplished without some stimulation from the Coordinating Council or some other external agency.

It is noteworthy that even in New York where interest in inter-institutional cooperation is sufficiently advanced that there have been two statewide inventories of such activity, there appears to be little more direct facilities sharing than is to be found in California.² Although there is a good deal of intercampus activity in the form of joint lecture series, workshops, educational research, planning conferences, information exchange, science demonstrations, and bilateral agreements for library, computer, and laboratory use, there appear to be only a handful of examples which involve the joint use of facilities on a significant scale.

Institutional Benefits

Eldon L. Johnson, speaking of interinstitutional cooperation generally, has summed up the prospects and objectives in these words:

. . . The monopoly of education by self-sufficient institutions is broken. Beyond each campus is an educative environment, a network of learning opportunities, extending

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1. Fritz H. Grupe, "Guidelines for Organization," Interinstitutional Cooperation in Higher Education, 1970, p.22.
 2. Merton W. Ertell, Interinstitutional Cooperation in Higher Education, New York State Education Dept., Albany, 1957, and a study undertaken for the College Center of the Finger Lakes in January, 1970.

outward in off-campus space and upward in student age. Hence the college has new alternatives, new extensions, new dimensions. . . .

Among the options are new cooperative organizational forms and new implementing technology, to extend the reach, to widen the access, to round out the incomplete. . . . This is a supplement, not a replacement. It is an aid, not a panacea. It is an inert instrument, an open channel; hence what goes through it is the crux of the matter. It is easy theory but hard practice.³

Five principles which have been advanced to guide the effective operation of consortia probably apply as well to all facilities sharing agreements. These are:⁴

- (1) The Primary purpose must be to strengthen the educational programs of the participating institutions;
- (2) Cooperation cannot be imposed, it must be a direction taken voluntarily;
- (3) Each institution must be able to preserve its individuality whatever the organizational arrangement;
- (4) There must be ample opportunity for continuing consultation; and
- (5) The indirect as well as the direct benefits must be recognized.

If a plan for the joint use of facilities is to survive all the obstacles it will inevitably encounter, it must offer real benefits to the participating institutions. These benefits must include, for instructional programs, a significant expansion of educational opportunities for students.

It is also essential that the institutions themselves be sufficiently committed to what is proposed to be willing to devote the time and resources necessary to accomplish real gains. Too often, cooperative agreements languish and fall short of their original intentions because the participating institutions have never been convinced that the

3. Eldon L. Johnson, "New Collegiate Options Through Joint Action," Liberal Education, March 1968, p. 80.

4. See Five College Cooperation: Directions for the Future, University of Massachusetts Press; Amherst, Mass. 1969, pp. 14-16.

potential benefits to them individually are worth the effort -- and frequently because the original intentions have not been translated into specific objectives.

Emphasis on New Facilities

It is evident from recent experience that any substantial increase in facilities sharing in California must involve new facilities rather than those which are now being used to capacity or near capacity on each campus and which have become firmly identified as single-user facilities. Thus consideration of potential joint use must be directed primarily to future building needs and program planning.

In doing so it should also be acknowledged, however, that it will seldom be easy to obtain effective cooperation in the planning of new facilities and new programs without offering some significant incentive for doing so. Campus planners (not necessarily the designers of individual facilities) too often follow an institution's accepted pattern of development rather than going in new directions which changing circumstances may suggest or even require.

In developing policies and procedures to encourage the consideration of facilities sharing as a means for obtaining desired facilities at minimum cost, it is useful at some stage to attempt to identify those facilities for which there is little or no likelihood of sharing whatever the circumstances, and those for which there appears to be a real possibility for sharing when it is a practical alternative. In the absence of the kind of careful experimentation, which is seldom if ever possible as a basis for policy decisions of this nature, such categorization will be highly subjective. Nevertheless, it is essential as a policy guide if that policy is to be sufficiently concrete to be of use to capital outlay planners.

The following is a first tentative categorization based upon the evidence obtained and judgements formed in the course of this study:

- (1) Facilities for which there is little or no practical likelihood of significant sharing:

- Power, heating and cooling plants and related utility systems (except for adjacent campuses)
- Corporation yards
- On-campus student housing
- Cafeterias
- Administration offices
- Parking structures and lots
- General purpose classrooms
- Class laboratories
- Small music practice rooms
- Art classrooms
- Faculty offices
- Campus security facilities

Student services offices
 Student health centers (except for campuses which are
 short distance from one another)
 Bookstores
 Gymnasiums and field houses
 Student unions

(2) Facilities for which there is some real possibility of significant sharing:

Libraries
 Computer centers
 Specialized research laboratories
 Specialized off-campus instruction and research stations
 Urban projects
 Extension centers
 Stadiums
 Museums and gallerys
 Theaters
 Agricultural field stations
 Health science facilities
 Intermural and recreational fields
 Television production studios
 Entire campuses

Several points are suggested by such a listing, one of which is that within the total amount of space required for an average-sized campus, a relatively small portion is likely to be susceptible to sharing arrangements with other institutions unless the other institutions are very close by. This should not be used as an argument against planning for joint use, however, as the potential savings (and other benefits) may still be large even where they constitute but a small percentage of total costs.

Capital Outlay Plans

Originally it was intended in the course of this study to comb through the capital outlay plans of each segment with the objective of identifying elements and areas in which it might prove desirable to explore the feasibility and benefits of joint use by two or more campuses within or across segmental lines.

However, upon further consideration this approach was rejected as one which would probably prove to be unproductive for several reasons. Existing capital outlay plans for the next five to ten years now appear to have little prospect for funding and are therefore subject to substantial revision, reduction, and postponement.

In addition, and perhaps more to the point in this regard, all of the current facilities plans have been conceived and prepared for funding in terms of the needs of the campus on which they are to be located and with the expectation that they will be used exclusively (in all but a few cases) by the students and faculty and administrators

of that campus. Having been planned on this basis, they are rarely susceptible to useful consideration as shared facilities. Each project can easily be justified with respect to the needs of the single campus. Every general classroom building, library addition, administration office building, cafeteria, and parking lot has been planned and will be funded (or not funded) according to the enrollment and staffing projections for that campus. It would be pointless in most cases to urge that these projects be reviewed to determine whether some opportunity for joint use had been overlooked.

There are, nevertheless, certain exceptions. Among these are agricultural field stations, major library units, performing arts facilities, experimental laboratories, broadcasting facilities, industrial arts buildings, marine laboratories, fine arts centers, and off-campus extension centers. Planned facilities in these categories can and should be carefully reviewed to determine (a) whether alternative joint-use facilities are available and (b) whether the planned structure can serve more than one campus with or without some modification. There is point in doing so, however, only for facilities which are likely to be funded.

Examples of Joint Use Potential

In lieu of an examination of specific facilities which have been included in recent capital outlay proposals, it may be useful to deal in more general terms with a few specific types of facilities as examples of those for which there appears to be some real potential for sharing.

(1) Libraries. Libraries have often been among the first campus facilities to be suggested as likely possibilities for facility sharing and cooperation, but with little practical result. Because the library is also a symbol of the integrity of each campus, as well as a central location for many of the most essential academic resources for students and faculty alike, the library staff and other campus administrators have quite understandably resisted moves which might result in the dilution of those resources and the accompanying loss in institutional integrity. Nevertheless, rising library resource costs, the continued expansion and duplication of undergraduate library collections, and the growing specialization of needs of advanced scholars make it mandatory that new and more effective measures of interinstitutional cooperation be developed.

Unfortunately, enrollment growth in recent years has put great pressure on libraries in meeting the needs of their students, and has often forced librarians to restrict access previously granted to persons not attached to the particular institution. These restrictions apply not only to the books and other resources but to seating space and service points within the library. As a consequence, much of the effort to share library resources has focused upon methods of speeding up interlibrary loans and of preparing and transmitting facsimiles. This effort has had a very limited impact, however, in part because the

Interlibrary Loan Code of the American Library Association largely limits interlibrary borrowing privileges to graduate students and faculty.

A recent report entitled Problems in University Library Management by the management consulting firm of Booz, Allen, and Hamilton, Inc., for the Association of Research Libraries, advanced this recommendation regarding interinstitutional cooperation with respect to library services:

Opportunities for increased interinstitutional cooperation in the use of library resources should be pursued more aggressively. The ARL and the ACE should jointly sponsor research designed to identify new approaches to and requirements for interinstitutional cooperation. Consideration of interinstitutional arrangements and the financial needs of university libraries should take into account the potential work and service capabilities of the Library of Congress, other national libraries, and organizations such as the Center for Research Libraries. The research should investigate the impact on the productivity and effectiveness of the individual scholar of the existing and possible future interinstitutional arrangements for the sharing of library resources.⁵

According to this report, existing interinstitutional arrangements for the sharing of library facilities and resources are now largely limited to:

1. Inter-library loan agreements commonly using trucks as a means of delivery;
2. Use of separate or shared cataloging services of the Library of Congress;
3. Agreements among nearby institutions giving faculty and graduate students mutual reader privileges;
4. Participation in regional bibliographic centers (e.g., in Denver and Philadelphia);
5. Participation in a program of the Center for Research Libraries to permit joint acquisition and common central storage of little-used and expensive library materials;
6. Limited regional arrangements within multi-campus state higher education systems;
7. Participation in regional arrangements to use telecommunication linkages to permit sharing of computerized book ordering, cataloging, and shelf preparation.

5. Problems in University Library Management, Booz, Allen and Hamilton, Inc., for Association of Research Libraries, Washington, D.C., 1970, pp. 8-9.

Despite these and other isolated forms of cooperation, the authors of the report concluded, "Consideration of interinstitutional opportunities for more effective resource utilization has low priority in library planning."⁶ Although many institutions were found to have formed some type of library consortia, upon closer examination these were determined in many instances to ". . . represent more the aspirations of participants than operational reality."

In responding to the survey conducted for this study, a State College president expressed his view of the potential for library facility sharing in these words:

. . . I think we could save a great deal of money and greatly improve our educational resources if we began to explore ways of sharing library facilities. In particular, I think it might serve a very useful purpose to have two or three regional library centers which kept large numbers of low-use volumes. Each college and university campus could have a local card catalog from which such volumes could be selected or ordered during the day and, by a night delivery service, could be made available the next morning. This would greatly reduce the tendency for each college or university to purchase volumes that are seldom used. There must be tens of thousands of such titles that are duplicated in library after library and yet are used two or three times a year. I wish someone had the time and energy to explore this possibility.

On the other hand, another State College official pointed to one of the major obstacles to library sharing, the belief that sharing (of a somewhat different kind) can easily lead to an overburdening of existing facilities:

There is concern on the part of our College Librarian that public schools, including community colleges, tend to make the availability of our college library facilities substitute excessively for the provision of their own facilities (books, etc.). Because of our heavy enrollment and limited library facilities, excessive use of the privilege now in effect could, in the opinion of the College Librarian, jeopardize continuation of the program. Generally speaking, there is too much assumption on the part of the general public in the community that the College Library is to be considered as a "public library." Good public relations are difficult to maintain when at the same time we attempt to preserve sufficient availability of our library facilities for our own students and faculty.

6. Ibid, p.37.

Nevertheless, the potential benefits of increased library sharing and coordination of library services and administration needs further exploration by librarians, campus officials and fiscal analysts. Recent experience with computerized operations and their costs has led experts to believe that most college libraries have to live with much the same space, staffing, and budgetary problems for the next twenty years that they face today.

A note about the new library addition at UCLA may also be pertinent. UCLA rightly claims a remarkable achievement in having doubled its library holdings -- going from 1.5 million to 3 million volumes -- within ten years while also adding quarters for several outstanding special collections. Yet this achievement must be examined carefully as to what it has meant and will mean to other campus and community libraries. Clearly, the aggregation of library materials and facilities on the UCLA campus, however necessary in terms of the campus population, has to some extent drawn resources away from other campuses. It would seem equally clear, then, that UCLA has a strong obligation to provide access to its library to non-UCLA students, faculty, and others who can benefit by using those resources -- access which goes well beyond the customary statements of intent which are so often denied in practice.

(2) Oceanography Facilities. The whole field of oceanography, including related marine sciences and technology, provides an excellent example of a new field in which interinstitutional cooperation offers great potential benefits, but in which, with one important exception, nearly every campus which is near the coast has sought to capture for itself the resources and reputation for leadership. With the notable exception of the Moss Landing Laboratories of the California State Colleges, opportunities for cooperation and facilities sharing have largely been ignored, at least at the campus level.

Yet there have been indications among those who work in this field that there is a willingness to cooperate if institutional barriers are removed. As a consequence, a variety of informal cooperative ventures and poorly coordinated planning by individual campuses has developed. There is still the potential for moving either toward an extreme of campus individualism and duplication of effort or toward creation of a highly integrated coastal network of instructional and research facilities. It is not yet clear which way development will go.

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7. The recent formation of eight regional library cooperatives among California's Community Colleges is an encouraging sign that Community College officials are not ignoring this matter.

Recent and current planning of a cooperative sort is represented by such groups as the Southern California Marine Technology Educational Council, formed by some twenty-three Community Colleges; Cabrillo, Hartnell and Monterey Peninsula Colleges which, have initiated a joint development plan for a marine technology training program; the Moss Landing Marine Laboratories; the University's Bodega Bay Marine Station, and the University of Southern California's Catalina Island Marine Science Center, which is operated in cooperation with six other public and private institutions.

On the other hand, and despite recent reappraisals of manpower requirements in the fields of marine science and oceanography, there are still a number of Community Colleges, UC campuses, State Colleges, and private institutions attempting to acquire for themselves individual positions of leadership in this field. This means not only acquisition of tidelands access but also the construction of on-campus and off-campus marine science facilities. For example, the most recent capital outlay budgets indicate proposed expenditures totaling \$7.7 million for three additional marine science facilities in the next three years. If greater encouragement is not given to interinstitutional cooperation in this field, this is likely to be the direction future development will take.

(3) Urban Educational Centers. Among the projects submitted in 1970 for Special Opportunity Grant funding were four that called for the creation of urban area consortia to deal with educational needs of urban communities.⁸ Among these perhaps the most ambitious was one which provided for a consortium, including Fresno State College, UC Santa Cruz, and Fresno City College, to develop plans for construction of a "multi-purpose educational center" to be located in the Fresno model cities area and to be operated by the three institutions. The principal objectives of the center (which did obtain a SOG grant) are to encourage more minority and low-income students to go on to higher education, especially in public service training and the

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8. In 1966 Congress enacted amendments to the Higher Education Facilities Act of 1963, providing for grants to be made to state commissions (in California's case, the Coordinating Council) for state-wide Comprehensive Facilities Planning activities.

Last year the U.S. Office of Education decided to divide these Comprehensive Facilities Planning Grants into two programs: a Basic Grant Program and the Special Opportunity Grant program. The SOG grants are intended to permit individual institutions to undertake studies, surveys or related projects that are of particular relevance to current urgent problems. These studies or projects are to be primarily for planning for facilities (or planning to determine the need for facilities or particular types of facilities) in urban areas -- particularly in or near those cities which have been designated as Model Cities by the Department of Housing and Urban Development.

professions, and at the same time to create more nonprofessional job opportunities in public service fields such as health, welfare, and education.

Urban centers of this type, in which institutions of higher education commit their resources cooperatively -- and, it is hoped, on a long-term basis -- so as to extend their reach into those urban areas which have been denied access to higher education, represent one of the clearest examples of the potential benefits of facilities sharing. Such sharing can take place not only through cooperative operation of the urban center itself but through provision for cross-registration for urban center students at the participating institutions and for use of other resources on the existing campuses.

Although it must be acknowledged that the specific case at hand, the Fresno Consortium, has several serious weaknesses, including a total dependence on external funding, a minimum commitment to the consortium structure, and lack of participation by senior campus officers, it nevertheless has the potential for encouraging other and more thoroughly planned efforts of a similar type. If this potential is to be realized, however, the Fresno consortium will require a greater degree of commitment than it now enjoys from those who are responsible for its operation.

(4) Graduate Centers and Networks. Another important possibility is in the establishment and operation of graduate centers, in areas which do not now have such centers, through the cooperation of the University of California with one or more State Colleges or private institutions. With the recent reductions in many graduate programs, reflecting the sharp reduction in the current demand for Ph.D.'s, this may be the only justifiable way to extend graduate training, apart from training in the health sciences -- and it may be the best way to expand training opportunities in that field as well.

The Council's recent report, Guidelines for Increasing Efficiency in Graduate Education?⁹ points up the problem of high-cost, low-enrollment, graduate-level instruction among the University campuses and the State Colleges, and the importance of limiting such instruction to a few campuses. It will be of substantial assistance in accomplishing this objective if at the same time intercampus enrollment and communication are expanded so that faculty and students on all campuses have access to the programs and facilities of those campuses which are chosen to become centers for certain fields of instruction and research.

The choice is between, on the one hand, continuing to attempt to make each campus a great educational supermarket, and, on the other,

9. Coordinating Council for Higher Education, Council Report 71-4, March 1971.

establishing educational centers and networks which provide much the same in the way of instructional and research opportunities without the heavy concentration of inevitable duplication of resources which the existing pattern requires.

This is related, of course, to the question as to whether University and State College campuses are to be predominantly regionally oriented, and therefore developed as "general campuses," or assigned a statewide role which may be more compatible with greater specialization. When support funds were relatively abundant, the question was usually decided in favor of the policy of making every campus a general campus. Now that support funds are increasingly scarce, there is evidence, particularly within the University system, that greater specialization within a statewide framework will be encouraged. If ways can be found to develop greater intersegmental cooperation, it will be found that greater specialization is also possible in regional units.

Student Attitudes

Student attitudes toward cooperative arrangements have generally been found to be favorable. Experience has indicated that students are grateful for opportunities to take courses and otherwise utilize the resources of other institutions, particularly when they see these to be resources which they cannot reasonably expect their own campus to provide. Although campus administrators may fear that arrangements which send students off campus to other institutions (or bring in faculty from other campuses) will weaken student loyalties for their own campus, this does not appear to be an important consideration for the students themselves. Students, like the faculty, appear to be more interested in maximizing their individual opportunities than in attempting to preserve some concept of self-sufficiency for their "home" campus.

Experience with cooperative instructional programs in other states (e.g., the Three College Program of Haverford, Bryn Mawr, and Swarthmore) has led some observers to believe that it may be difficult to get large numbers of students to travel regularly more than a mile for courses offered on another campus. Thus, they conclude that it often proves much easier to have the faculty travel, although this may eliminate the opportunity for faculty as well as faculty sharing. But students at many of California's public institutions are of necessity much more mobile than their counterparts at small private institutions in the East. And there is also evidence (e.g., in the CIC Traveling Scholar Program) that advanced students will take advantage of opportunities to travel to other campuses to use special resources if it is made practicable to do so.

It has been observed that "the array of faculty talent that once sufficed for undergraduate education is no longer adequate. Those

colleges that try to make do as self-sufficient teaching communities are deceiving themselves."¹⁰ Colleges that face this problem have the choice of doing nothing, attempting to expand into some version of a university, or joining with other academic and nonacademic institutions in cooperative programs to combine their resources. These colleges can, for example, create, through cooperation and the sharing of facilities, their own educational networks, with each campus serving as home base for each set of students. Or they can encourage qualified students to create their own networks (just as many of California's highly mobile students have for years) by authorizing cross-registration, reducing obstacles to transfer, creating student exchange programs, and other measures. In either case students will be freed from the limitations of a single-campus environment and gain opportunity to enjoy some of the benefits of a "study abroad" program within their own state.

Financing

Effective interinstitutional cooperation requires real commitment on the part of the participating campuses. Such commitment in most cases is best measured by the extent to which the individual institutions are willing to contribute directly to the cost of the cooperative effort.

This does not mean, however, that the institutions should be expected to meet the full cost of cooperative activities out of funds originally provided for other purposes. If the State is going to give encouragement to interinstitutional cooperation, it must itself allocate some significant amount of funding through such cooperative devices. If, for example, there is real merit in encouraging the institutions within an urban area to cooperate in the several aspects of expanding educational opportunity for minority and low-income students, the State must find ways to channel some portion of its support for EOP through cooperative arrangements.

Unfortunately, current State budget procedures which focus upon segments and institutions, rather than upon goals and programs, are themselves an important obstacle to major cooperative efforts. These procedures must be modified if interinstitutional cooperation is to be achieved on a significant scale.

The federal government has begun in the past few years to give support and encouragement to interinstitutional cooperation through a number of devices, including Consortium Research Development Project (CORD) grants; joint-use requirements attached to the placement of large facilities, such as are required for high energy physics and related research, on individual campuses; and special consideration given to regional consortia, especially those involving two-year and four-year institutions, for Community Service and Continuing Education programs under Title I of the 1965 Higher Education Act.

10. Morris Keeton, "Institutional Cooperation -- A Mixed Blessing," Liberal Education, March 1968, p. 54.

There is no reason why the State cannot follow a similar pattern of allocating a portion of its support and capital outlay funds to cooperative projects. This might be done either directly or through the Coordinating Council, which would act as the State's agent in reviewing proposed projects and in supervising their continuing support.

RECOMMENDATIONS

The following recommendations are proposed for consideration by the Council as practical measures to encourage facilities sharing among California's public and private institutions of higher education. None requires a serious disruption of existing policies and procedures, as it is unlikely that any effort to increase facilities sharing which does significantly disturb existing policies and procedures will succeed.

Also, it should be re-emphasized that facilities sharing as an end in itself or as a dollar-saving device is unlikely to attract sufficient interest to be implemented on a significant scale. If it is to overcome the numerous obstacles to inter-institutional cooperation, facilities sharing must carry with it other benefits -- improvement of instruction, an expansion of student opportunities, encouragement for productive innovation, etc. -- and in most cases these must be the primary objectives.

1. The University of California and the California State Colleges should be asked to report annually on plans for the joint use of new or existing facilities within each segment and across segmental lines.

The Council has frequently used its powers to require detailed reporting by the public segments as a device for obtaining a policy objective (e.g., in regard to EOP, admissions, etc.). By asking the University and the State Colleges to report each year on any planned facilities sharing, it would, in effect, require the two segments to include joint use as an explicit consideration in their capital outlay and program planning.

Such a requirement would become burdensome to the segments only if they do not in fact develop plans for the sharing of facilities among their campuses and outside their systems. If this proves to be the case, then the Council will have a clear indication that its efforts in this direction have not been successful, and it can then decide either to drop the reporting requirement or to seek to develop new ways to encourage facilities sharing.

2. In approving each new, special-purpose off-campus facility, the Regents, the Trustees and the Council should require that its plan include reference to potential use by students and faculty of other institutions.

Every off-campus facility of a specialized nature should undergo thorough examination as to the potential for joint use if joint use is not included within the initial planning. Such facilities include marine laboratories, agricultural and forestry stations, urban study centers, extension facilities, science research laboratories, and the like.

As a matter of policy, the Regents of the University and the Trustees of the California State Colleges should make joint use of such facilities a necessary criterion for approval whenever the possibility for joint use exists. Moreover, it should be noted that such joint use should cross segmental lines if there is potential benefit to one or more institutions, public or private, outside the system in which the plan originates. The Council itself should take primary responsibility for encouraging intersegmental sharing, in view of its broader perspective and responsibility.

The segmental boards and the Council should also give careful consideration, when reviewing each proposed new off-campus facility, to the possibility that there may be an existing facility sufficiently similar in objectives to that which is proposed which can provide the same opportunities for instruction, research, or other public service under a sharing arrangement. It will be difficult, of course, to force two institutions to share a facility if that is not their desire, but by making known in advance its policy in this regard, the Council will encourage early planning for joint use which might otherwise be neglected.

3. The Council should consider the desirability of awarding five to ten points to projects which include provision for a significant amount of joint use in applications for Higher Education Facilities Act funds.

The Council, as State agent for the distribution of federal funds under the Higher Education Facilities Act, has a device by which it can give immediate encouragement to planning for the joint use of higher education facilities. Facilities Act funds are awarded to eligible applicants on a matching basis according to a point system which the Council itself has devised. To provide a positive incentive to joint-use planning it need only reorder that point system to give recognition to projects which include plans for the joint use of the proposed facility by one or more other institutions.

Such an award system has been employed by the Council to encourage faculty salary increases, library expansion, and increased utilization. Although the Council would have no way of requiring that the institutions which receive federal funds on this basis actually carry out their plans for joint use, it would create the opportunity to do so, an opportunity which is often lost if not incorporated in the initial planning of a new facility.

4. As soon as the Council staff has gained some experience with the use of its Facilities Analysis Model, it should add to the model capability for measuring the potential costs and savings resulting from the proposed joint use of facilities.

To date there have been no detailed and reliable studies of the alternative costs of shared facilities as compared with single-user facilities, with the possible exception of those undertaken by the Claremont Colleges regarding their special circumstances. There are several reasons for this, including the continuing lack of compatible data, the relative lack of experience with the planning and administration of facilities sharing arrangements on a significant scale, and the absence of incentives to undertake such studies. The principal obstacle, however, is that the expense of undertaking a sophisticated cost analysis under present circumstances is often itself too high (in relation to unknown benefits) to justify such analysis.

The development of the Council's Facilities Analysis Model, however, may be expected to make it possible to begin such studies. Just as the model is expected to make it practical to assess the full (simulated) cost consequences of any particular set of facilities standards, it should also make it possible to take into account potential increases (or decreases) in utilization resulting from joint use. Although this will by no means provide a complete answer to the question as to whether or not joint use is desirable in any particular set of circumstances, it will provide a reliable measure of the probable direct cost consequences of a decision either way in such cases.

5. The Council should continue to give strong encouragement to interdistrict and regional planning among Community Colleges with respect to the location of proposed new campuses.

In present circumstances, in which Community College district boundaries often reflect local tax practices, population patterns of an earlier period, and the interaction of a multitude of local political factors, it is essential that the Council continue to give strong encouragement to cooperative planning among the Community College districts of the State. As long as each district is under strong pressure to establish a campus to serve every significant population cluster within its boundaries, it will be surprising if districts do not find themselves duplicating one another's facilities in an effort to serve population centers which spread across district lines.

The Council has done much to minimize this problem in its periodic studies of the need for additional centers of higher education and its more recent efforts to encourage regional planning among the Community Colleges. And the Community Colleges themselves, through expanded usage of interdistrict attendance agreements, for example, have found ways to meet the educational needs of those who reside near district boundaries.

The underlying problem will remain, however, until there is a redrawing of district boundaries, which is unlikely in the foreseeable future because of the difficult local problems it would entail. Thus, the Council will continue to have a major responsibility for encouraging the joint use of Community College facilities and joint planning among the districts in each major region of the State as a matter of promoting the orderly development of higher education. This responsibility is made all the more important by the serious shortage of capital outlay funds which now affects all of higher education in the State.

The Council has it within its power to exercise this responsibility in several ways: in the manner in which it deals with the next "additional centers" report, in its approval of Special Opportunity Grant applications, its allocation of federal long-range planning funds, and in comments it may offer to the Governor and Legislature regarding annual capital outlay budgets.

6. The Council should seek to extend regional planning for interinstitutional cooperation of the type proposed in its application to the U. S. Office of Education for a Special Opportunity Grant for Extending Higher Education Services - Northeastern California.

The proposal which the Council's staff drew up on short notice, and which the Council has approved for submission to the U. S. Office of Education, for a federal Special Opportunity Grant to finance an initial effort at regional educational planning in the northeastern California counties is an imaginative and potentially very important approach to a problem which is not confined to that area alone. The concept of bringing together the Community Colleges, State Colleges, and University campuses within a region to consider the unfulfilled needs of that region for higher education is one which can be applied to every region of the State.

It will be important for the Council to undertake this project, if it is funded, with the understanding that it may well be a pilot project for similar cooperative regional planning elsewhere in the State. The absence of such regional planning is at present one of the most striking aspects of the administration of higher education in California.

If similar planning projects are undertaken in other areas of the State it will be essential to include the private institutions as full partners in that planning. If the obstacles to regional planning on the part of the three public segments of higher education can be overcome, it should also be possible to overcome the differences between public and private institutions for this purpose.

7. The Council should consider initiating a program of "seed" grants to institutions within specific regions (e.g., each major metropolitan area) to undertake cooperative, interinstitutional programs related to the needs of the region.

If the Council is to play a major role in encouraging inter-institutional cooperation involving the joint use of on-campus and off-campus facilities, it will have to be in a position to allocate financial support for that purpose. Existing forms of financial support place a heavy emphasis upon individual campus development. To offset that emphasis, the Council will need to find ways to divert more State and federal funds to cooperative efforts.

In the past several years there has been some movement in this direction with respect to the federal funds which the Council administers, but on a relatively minor scale. There has been no significant movement in this direction with regard to State funds apart from support for Moss Landing.

As a means of exercising positive leadership in this area, the Council should consider proposing to the Governor and to the Legislature that some (small) portion of State funding for higher education be appropriated to the Council for reallocation to cooperative projects proposed by the institutions. This funding would be similar to the Special Opportunity Grants provided by the federal government, except that the State and the Council would have full authority for determining the use of the funds.

Such grants could be used for a number of purposes: for example, creating Educational Opportunity Programs which encompass entire metropolitan areas and utilize the combined resources and special abilities of all the institutions of higher education in each area; similar efforts in such diverse fields as oceanography, the performing arts, and urban studies; regional planning to match admissions policies and procedures to the regional demand for higher education; and the development of "campuses without walls" as a method of meeting the demand for continuing education.

This might appear to be a sharp departure from the Council's existing role in relation to the appropriation of State support for higher education, but it would in fact be no more than an extension of its existing powers as they have been established with respect to federal aid for higher education.

8. The Council should explore the feasibility of creating one or more urban higher education centers through which all of the public higher educational resources within the area would be made available to the urban population for undergraduate, graduate, and continuing education.

Whether or not the Council seeks to obtain State funds which it would be responsible for allocating to cooperative programs, it should assume leadership for the development of at least one urban center for higher education located in an "inner city" area and utilizing the combined talents of State College, University, and Community College personnel. San Francisco, where such a center has been discussed, offers an outstanding opportunity for such a center -- both as to the need for higher education facilities in the heart of the city and because of the excellent institutions (public and private) available to contribute to it.

Such a center need not be begun as a full-scale institution designed to meet every educational need from freshman survey courses through graduate professional training. Initially the center itself might only provide an instructional core with supporting student services, including counseling. The balance of the instructional opportunities could be provided by a flexible system of cross-registration which would permit students to obtain more specialized instruction at any one of the participating institutions.

In this way, the Council and the participating institutions would not only be acting to extend educational opportunities but they would be doing so in a manner designed to make the most efficient use of existing facilities and resources.

9. The California State Colleges and the University of California, with the Council's encouragement, should explore ways to increase mobility among upper division and graduate students within each segment.

California's student population has always been highly mobile, in no small part because of the extensive Community College system which encourages students to divide their undergraduate years between at least two institutions. Moreover, students themselves appear increasingly willing to go where they think the educational and other opportunities are greatest for them.

The University and State Colleges might very well capitalize upon this student mobility by increasing opportunities for cross-registration between campuses (within each segment), establishing traveling scholar programs, and in other ways making the resources of one campus more readily available to students enrolled at another. Such a policy would work to increase utilization of high-cost, low enrollment facilities where they are now located, while reducing the need to provide such facilities on other campuses as well. It would also fit in well with the systemwide admissions programs which both segments have now established, enabling students to enroll wherever there is adequate space, but giving them the opportunity to obtain specialized opportunities on one or more other campuses as needed.

Such programs could be operated on either a regional or a statewide basis, depending on the specific academic field and the current availability of resources within that field.

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