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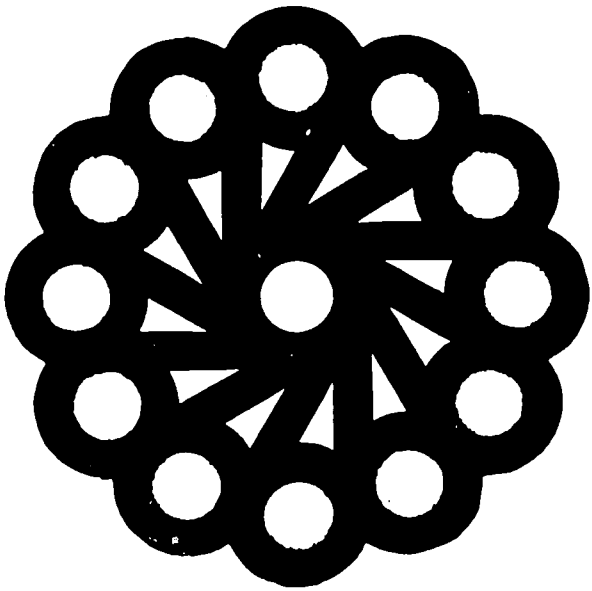
ABSTRACT

Project Outreach is a consortium of public higher education institutions in California that aims to provide access to learning opportunities, by use of televised instruction, to those in the community who do not have access to educational institutions or programs. This document describes the first year of the project, Phase 1--planning. The chapters of the book are as follows: 1. An Overview of Project Outreach; II. Current Status of Nontraditional Education; III. Target Population; IV. Counseling; V. Curriculum; VI. Delivery Systems; VII. Evaluation; VIII. Administration; and IX. Future Directions. Notes are provided. (DB)

PROJECT OUTREACH



TITLE I OF THE
HIGHER EDUCATION ACT OF 1965
COMMUNITY SERVICE AND CONTINUING EDUCATION

administered by

THE COORDINATING COUNCIL FOR HIGHER EDUCATION
STATE OF CALIFORNIA

Under the aegis of Title I of the Higher Education Act, the University of California Extension, San Diego; California State University, San Diego; and Coast Community College District designed a plan to:

- Increase Educational Opportunities
- Effect Participation of Community Agencies
- Facilitate Exchange of Resources among the Three Levels of Higher Education
- Utilize Modern Communication Systems Emphasizing Television

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Preface

Project Outreach began in July, 1972. Operating under a grant from Title I of the Higher Education Act, Outreach developed as a cooperative effort of three consortium institutions: The University of California, San Diego; California State University, San Diego; and Coast Community College District, Orange County, California. It has since involved all of the public higher education institutions in both San Diego and Orange Counties.

The Outreach task force intends to make use of modern communications technology to provide access to learning opportunities for students in flexible ways in multi-locations. At the core of the Outreach thrust is television as a tool to assist in transcending campus and classroom boundaries.

This is a report of the first year of Outreach operation. The report identifies problems associated with using television as an institutional tool, problems of working together in consortium, and problems associated with non-traditional approaches to education generally. The Outreach task force has examined the problems identified in depth and has proposed strategies and solutions in many areas. This report will become the bullwark of continuing Outreach operation. The report emerges from a year's effort including three extensive task force meetings and innumerable committee meetings and working sessions. It represents the work of many people—all of those listed on the inside cover—and many more who contributed and participated in various ways.

Much is said today in the way of criticism of the fortress model of education. This report is in no way a criticism. Criticism of existing systems is necessary, but in criticising we must not destroy the achievements of the men and women who before us exerted great energies and talents toward the same goal—improved educational opportunity for all. That is what we have tried to do—to build.

Outreach has encompassed evaluation of past achievements and synthesis of ideas and practices across institutional lines aimed to eliminate duplication of efforts. Injection of contemporary ideas and methods to provide new approaches has been our goal.

This report, then, emerges not only from a year's effort, but from hundreds of man years of experience on the part of the task force and those from whom we have gleaned information and experience. The report is a beginning. Launched from the pad of this report, the consortium intends to cooperate and bend every effort toward causing educational approaches, which have television as their core, to succeed.

As Dr. Norman Watson has so often said, . . . "The pieces are all here, if we can only put them all together." The Outreach effort has begun to put them all together. It has been an outstanding group with which to work. The Co-Directors of the project are indebted to each of the task force members for the outstanding job he has done; to the committee chairmen, for the leadership they have given—for they have been the leaders; to Barbara Swartling and Monty Ruth, for helping in a research capacity and in bringing so much information to us; and to Barbara Otte, who has so capably served as Project Secretary.

The three segments of higher education have demonstrated they can and want to work together—and to that end, we intend to continue.

Bernard J. Luskin
Martin Chamberlain
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Chapter I

An Overview

of Project Outreach

Introduction

Stimulated by a grant under Title I of the Higher Education Act of 1965, Project Outreach brings together representatives of the three segments of public higher education in California in consortium. Leading the thrust is the University of California, represented by the University of California, Extension, San Diego; the California State Universities and Colleges, represented by California State University, San Diego; and the California Community Colleges, represented by the Coast Community College District. In addition, all public higher education institutions in San Diego and Orange Counties have been involved in Outreach activities.

The overall goal of the Outreach consortium is to design, coordinate, and implement means of extending educational opportunities to a large segment of the community not now having access to continuing education, community service programs, or course work for college credit. Its major concern is in the area of television and involves joint use of faculty, staff, and production facilities.

Through a combination of televised programming, correspondence materials, individual tutoring, study center-based activity, and counseling, the plan described on the following pages will permit educators to deploy needed educational substance to what has been a poorly served segment of the population. Working together, scholars and media professionals will develop programs which combine the immense outreach of modern mass communications with effective teaching methods. An education of the highest standards, including credit, skills packages, and degree programs can now be made available to those who have either been unable to attend traditional institutions or who find traditional institutions unattractive.

Project Outreach will develop in three phases: (1) planning, (2) production, and (3) implementation. The first phase has been completed. The purpose of Phase I (July 1, 1972, through June 30, 1973) was the *planning* of a system whereby the educational process may be externalized, emphasizing television, combined with other nontraditional strategies. Objectives met by Phase I activities of Project Outreach as a means to working toward achievement of its overall goal include the following:

1. The development of an operational procedure whereby the three segments of higher education in San Diego and Orange Counties may jointly design, produce, and offer televised instruction to the public.
2. The involvement of all other institutions of public higher education in the two counties in all phases of Project Outreach activity.

3. The exploration of cooperative participation with community agencies toward identifying target populations and their educational needs.
4. The study of nontraditional approaches to higher education.
5. The joint preparation of two television pilot programs to test the feasibility of interinstitutional cooperation in television course production.

The Outreach Task Force

In order to meet these objectives, a Project Outreach Task Force was formed, whose members include faculty and administrators of Outreach consortium institutions as well as personnel from other San Diego and Orange County colleges. Community representatives also served on the Task Force. A complete list of Project Outreach personnel is presented at the beginning of this report, and diagrams presenting consortium organization are presented on the following pages.

The Project Outreach Task Force formed nine study committees assigned to identify and explore the advantages and obstacles inherent in cooperative planning and production of educational materials for use among the three segments of higher education. Those committees include General Administration, Academic Administration, State of the Art, Target Population, Counseling, Curriculum, Delivery Systems, Evaluation and Research, and Future Directions. Their members were selected from within the Task Force and were augmented by their chairmen to provide additional representation from participating educational institutions. Subsequent chapters of this report discuss the activities of the project as a whole and the work and recommendations of individual committees.

Each committee met frequently to formulate plans and recommendations to deal with problems in its area of responsibility. The three members of the Executive Committee, responsible for the coordination of all Project activity, continually reviewed work performed by the study committees. Their respective assignments are shown below as follows. In addition, the entire Task Force met three times during 1972-73 to review progress and clarify overall Project direction.

In one sense, Outreach is an "umbrella" under which county consortia can merge to meet some of the educational needs of their respective geographical areas. Within the consortium an "Orange County Group" and a "San Diego County Group" are identified as distinct from the Task Force, which is working on general guidelines and cooperative production and course offerings.

As Project Outreach moves toward the offering of courses, the consortium continues to examine and explore potential cooperative arrangements with other agencies involved in assessing instructional materials. Subsequently, by utilizing inputs from both community leaders and academic specialists, common course offerings and programs will be identified. Proceeding cooperatively in implementing arrangements, Outreach will provide access to those materials.

SUMMARY OF PHASE I CONCLUSIONS AND RECOMMENDATIONS

During Phase I of Project Outreach, much consortium activity involved studying issues and problems associated with offering courses over television for

COMMITTEE STRUCTURE FOR PROJECT OUTREACH

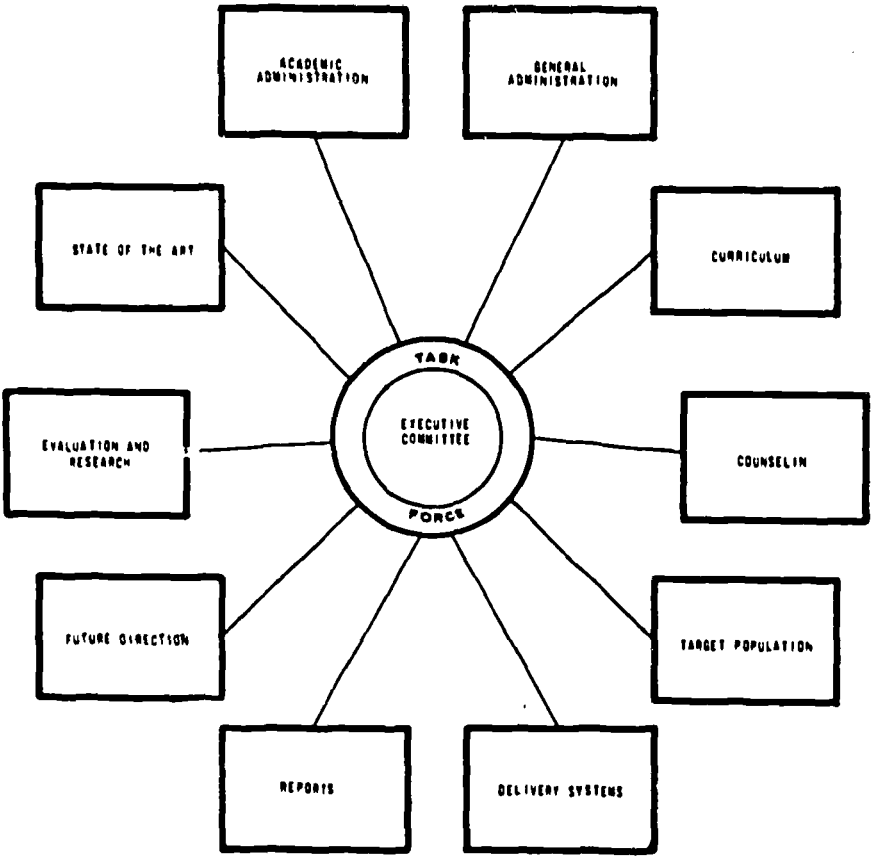

Figure 1

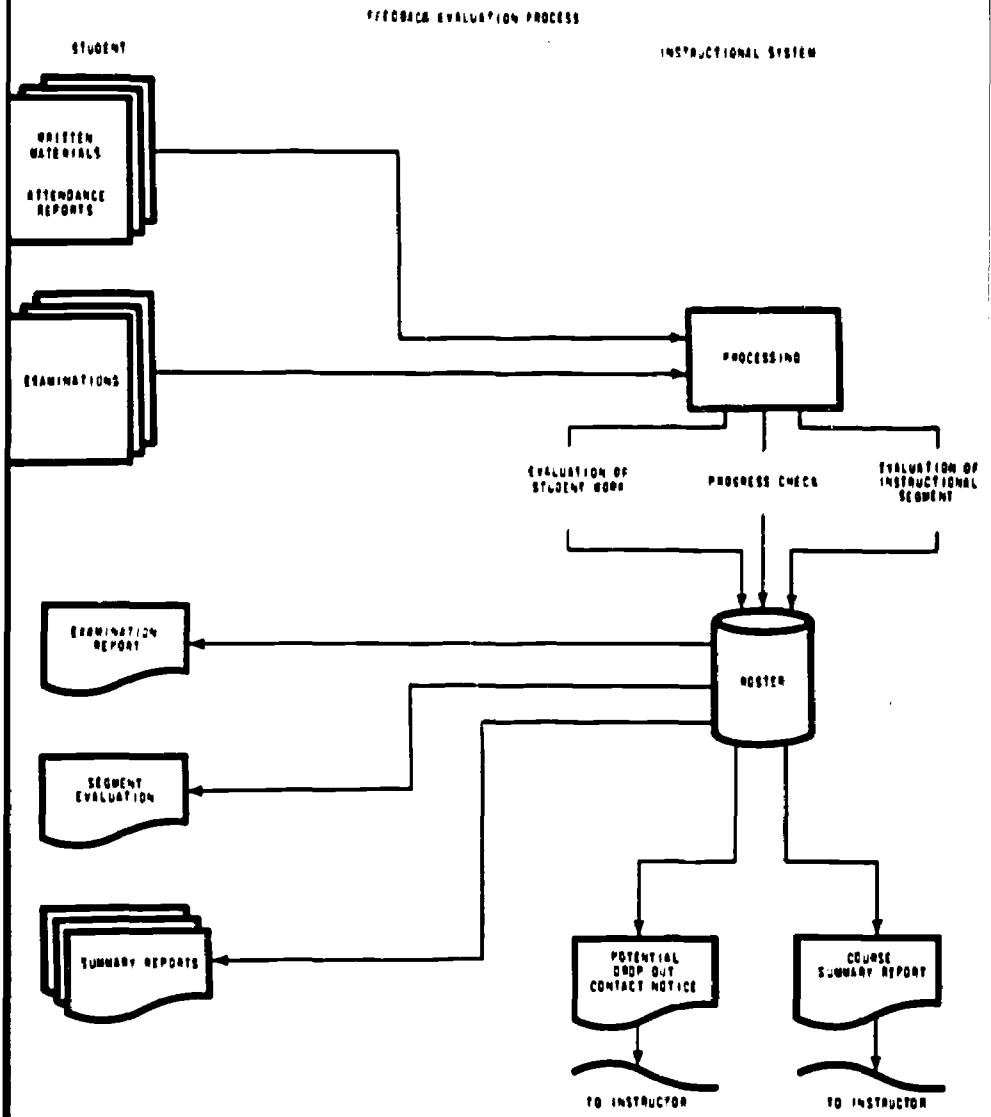
FEEDBACK EVALUATION PROCESS
STUDENT
INSTRUCTIONAL SYSTEM
WRITTEN MATERIALS
ATTENDANCE REPORTS
EXAMINATIONS
PROCESSING
EVALUATION OF STUDENT WORK
PROGRESS CHECK
EVALUATION OF INSTRUCTIONAL SEGMENT
EXAMINATION REPORT
ROSTER
SEGMENT EVALUATION
SUMMARY REPORTS
POTENTIAL DROP OUT CONTACT NOTICE
COURSE SUMMARY REPORT
TO INSTRUCTOR
TO INSTRUCTOR

Figure 2

credit. This report deals in depth, subject by subject, with the conclusions and recommendations reached by the respective Outreach committees regarding these issues and problems. The conclusions and recommendations are summarized below.

State of the Art

One of the first Outreach tasks was to comprehensively study existing nontraditional education efforts in the United States and Great Britain. That survey, presented in Chapter II, The Current Status of Nontraditional Study, provided a background for the Task Force displaying a picture of the status of new programs.

Target Population

The goal of Project Outreach, as previously noted, is to extend educational opportunities to persons now denied or who resist present avenues of access to education. The target population, in this sense, consists of all segments of the public which do not now enroll in available higher education institutions in addition to serving those now in college in nontraditional ways by adding new alternatives.

The Outreach Target Population Committee concluded that identification of a "target population" really takes place on two levels. One can first specify "member-types," listing classes of individuals known to be non-students. Toward this end, the committee's recommendations are two fold:

1. Research should be done to identify target populations in terms of numbers, needs, and characteristics; and
2. A community agency Task Force should assist the consortium in identifying specific educational needs of groups within target populations.

But it is equally important to recognize the reasons for attendance, dropping out, and nonattendance at college. The multitude of personal and environmental variables which come into play must be dealt with to truly change people's attitudes about the necessity and relevance of higher education for them and elicit a commitment to further learning from them.

Counseling

Counseling is a primary element in any successful educational program and must be an integral part of Project Outreach. Outreach sees the target populations as having very unique and specific needs. Its response will be in services which will "reach out" to the community. In addition to the campus population, the counseling component will serve a population usually ignored and will develop working links between the consortium colleges and other educational/counseling institutions in the two-county area. Committee recommendations are as follows:

1. The counseling component will include the following:
   a. Information-giving or advising--that aspect which provides students with course and institutionally-related information.
   b. Diagnostic--that aspect which provides clients with help in making educational/vocational decisions.
   c. Skill-building--that aspect which deals with student re-entry problems associated with a return to school.

2. Media and public service programs in the respective communities should be used to bring information about educational opportunities to potential students.
3. Specific training should be given to individuals to serve as counselors and tutors to serve the television student population.

Curriculum

In the initial phase of Project Outreach, the Curriculum Committee supervised the development of the two 30-minute pilot television programs--one in Psychology, the other in Ecology. The purpose of these pilots was to show that the consortium members could work together and to demonstrate the quality of televised materials required for viable telecourses.

For the pilot video tape in Introductory Psychology ("As Man Behaves"), the production team was led by Dr. Matt Duncan, of Coast Community College District. The San Diego curriculum group responsible for the pilot video tape in the environmental series, "Biosphere and Biosurvival," was led by Dr. George Cox, of California State University, San Diego. Dr. Cox worked in cooperation with Mr. Paul Steen, of KPBS, Channel 15, San Diego, and their production team. "As Man Behaves" is now complete and is being offered for credit via KOCE-TV, Channel 50, by community colleges in Orange County. It should be noted that Project Outreach produced the pilot program from which the remainder of the series was developed.

Of the many elements contained within an instructional system this size (one that encompasses broadcast instruction, correspondence, home study, tutorials, and other aspects, disseminated to a large and widely scattered audience), the visual product was found to be the integral component and requires careful institutional cooperation. The televised portion of the projected learning system is only one part among many; but it is the most expensive and difficult element to produce. It is the one component which will be shared by all colleges cooperating in offering the course. Use of the other materials is generally optional.

The most reasonable approach to developing curriculum for use by members of a consortium, therefore, is to recognize that there are varying patterns available for the use of the end product. In fact, the variety of instructional alternatives for each segment and course is unlimited.

Although the first materials prepared for Project Outreach use were complete course segments, it is recognized that a unit structure is sometimes restrictive. Alternative patterns for the end use of the curriculum design effort by individual institutions should be developed.

Committee recommendations include the following:

1. Needs of the target population should be carefully identified in the course of curriculum selection.
2. Faculty who are to share in a product's use must be allowed input into its development.
3. Multitalented instructional teams including teachers, instructional product developers, media technologists, and learning specialists should participate in course development.

4. Curriculum planners should investigate the availability of existing materials that can be incorporated within instructional television systems.
5. The concept of modularization should be employed, as it helps facilitate arrangement and rearrangement of individual segments and eventual updating of entire courses.
6. Components of instructional systems must be arranged so as to satisfy verifiable learning objectives.
7. Because television instructional systems provide for only limited student and teacher interaction, supportive group experience and teacher accessibility must be integrated into course design.

Of crucial importance are the supportive services which complete the system. They include printed materials, making available libraries and resource centers, providing for on-campus and telephone interaction with instructors, and operating counseling services. These components have been incorporated into the overall Outreach model and are the stuff of which the remainder of this report is composed.

Instructional Delivery

The Delivery Systems Committee identified and investigated the communications media which will enable the Outreach institutions to serve as public higher educational resources to their communities. Clearly, the communications technology necessary to make instructional television possible is here now. As cable communications, video cassettes, and computers become more widely available, instructional television will have even greater flexibility and impact.

The central medium is open-circuit television. Regardless of broadcast television's channel limitations, it is available in nearly all homes within Orange and San Diego Counties. The telephone is equally available to individuals. Radio is available for audio reinforcement throughout the day, and print materials can be readily made accessible via mail service. Carefully planned instructional strategies employing a mix of media appropriate to each teaching task can meaningfully assist in providing access to courses for credit to students in new ways.

Evaluation

Evaluation of Project Outreach activity includes three aspects: first, Phase I (planning) activities; second, the model developed by the Task Force during Phase II; and, third, the instructional system implemented during Phase II as a result of preceding activities. Although specific evaluation procedures and criteria await development in Phase II, careful scrutiny will be given to the degree to which Project Outreach meets its stated goals and objectives.

Project Outreach plans to evaluate courses and curricula as well, in terms of three aspects: target populations, feedback, and follow-up. Recommendations for the accomplishment of this task include:

1. Demographic information from enrollees in Outreach courses should be gathered and aggregated into student profiles, to be compared with profiles of typical on-campus students. Conclusions can thereby be drawn as to the degree to which the courses reach the target population and which portions they reach most effectively.

2. Feedback information should be used to evaluate two aspects of televised instruction: first, the effectiveness of learning materials in helping students meet course objectives and, second, the level of student achievement. Programmed instruction materials should be designed to assist in these tasks.
3. Follow-up data should be gathered from students who complete courses as well as from those who do not, in order to assess the effect of enrolling and participating and to identify reasons for discontinuing. Project Outreach is particularly interested in whether initial enrollment in a televised course serves as a precursor to subsequent enrollment in college work.

Administration

The Project Outreach Task Force, through its two committees dealing with administrative matters, had identified significant and complex administrative problems inherent in *jointly* externalizing the educational process. Nevertheless, the Task Force believes that its goal to offer education which accommodates students' life styles and work schedules merits continued efforts toward making a cooperative system work.

General Administration

The majority of General Administration Committee's work dealt with matters of copyright, fees, and administrative vehicles as areas requiring the most urgent attention. Defining the nature and powers of a consortium administrative vehicle suggests means of dealing with other problems as well.

In order to make preliminary recommendations in each area and find grounds for cooperation as a consortium, representatives of the three submitted policy statements of their respective institutions. Advice was also obtained from legal counsel for Orange County and from the San Diego State University Foundation. The committee also recognized that certain institutional structures and regulations exist which might impede the operation of the proposed consortium functions and searched for means of overcoming those obstacles. The following preliminary recommendations were set forth:

1. Two possible approaches to copyright are open to instructional television consortia:
   a. The producing entities may *delegate* rights to the consortium by formal vote of their governing boards; or
   b. The producing entities may *retain* copyright, but with a prior agreement as to sharing among consortium members.
2. Although the three segments' respective fee structures impede an arrangement whereby a uniform fee among all institutions for a particular course, it is recommended that an approval be sought from governing boards for uniform fees on an experimental basis, resorting to differential fees only if necessary.
3. Institutional representatives must determine what proportion of direct and indirect costs of televised instruction course fees are to

cover. Such information will determine how high any fee must be.

4. Because a viable operating consortium needs some sort of central decision-making and administrative authority, Project Outreach should work to define precisely the nature of the consortium. Functions which must be handled either in a central office or by specific assignment to one of the consortium members include:
   a. Receiving, holding, and disbursing funds; accounting for income and number of students enrolled.
   b. Holding copyrights and/or sharing agreements.
   c. Negotiating agreements for marketing of materials among other institutions.
   d. Coordinating grants and contracts; searching for new sources of funding; drafting proposals and requests.
   e. Acting as a *clearinghouse* for production and academic arrangements between institutions regarding courses.
   f. Exercising fiscal control over production costs.
   g. Conducting research and evaluation of markets reached in terms of target populations. Maintaining profiles of class enrollments; seeking new student populations.
   h. Coordinating public relations and promoting programs to new audiences.
5. In order to make any central administrative vehicle operational, each consortium member must examine its own capabilities and priorities within the context of contributing personnel and funding to a central consortium office. Member institutions must agree as to what tasks fall within the functions of the consortium central administration.

Academic Administration

Broadly, areas of concern have been:

1. Admission
2. Registration
3. Degrees and/or Certificates
4. Credit
5. Instruction

The Academic Administration Committee was charged with designing and implementing a system of academic procedures in terms of the above categories, within which all three segments of higher education can legally and administratively function. Since each institution is bound by the rules and regulations of the segment to which it belongs, a flexible overall consortium administrative structure is necessary. Toward that end, the committee made the following recommendations:

1. In light of the goal of Project Outreach to reach new students, admission and enrollment should be open. This can be facilitated by initially offering lower-division courses with no prerequisites.
2. Students should register in *courses* (not "programs") at the member institutions of their choice, according to each institution's own rules regulations.

3. Project Outreach should not be a credit or degree-granting agency; all course credit and degrees should be awarded individually by member institutions.
4. Credit for instructional television courses should be acceptable toward degrees at member institutions, with courses themselves recognized as part of regular departmental offerings. Course credit should thus be transferable among consortium institutions in the same way that transfer credits are presently accepted by colleges and universities.
5. Procedures should be devised whereby faculties at member institutions may have input and recourse concerning course design and production. When a particular course need is identified, a course content committee responsible for the design and operation of the course should be established by the consortium. Its members should represent each institution which will offer the course.
6. Course instructors should operate under the administrative authority of the consortium office and possibly be remunerated from consortium funds.
7. In the operating consortium, funds for ongoing television courses should be regularly appropriated in institutional budgets as well as sought from other sources. Externalized instruction should be viewed by academic departments as an integral complement to traditional classroom instruction.

Summary

Project Outreach joins a host of experiments in nontraditional study being carried out by universities and colleges throughout the nation to apply new approaches to the educational needs of our society. Outreach aims specifically to use television and related technologies to extend educational opportunities to those large numbers of people in the communities of San Diego and Orange Counties who do not now have access to higher education in the conventional sense. The task is to devise a system whereby the three segments of higher educational can work collectively and, where appropriate, separately to provide opportunities to this population whose needs can be identified. All the techniques of modern communication effective in bringing educational material to students at many locations will be used.

Television and related communications technologies are overdue for use as tools of higher education. Television reaches virtually every American home and has been proved effective in teaching. When properly implemented, it has a quality of immediacy, creating a sense of involvement with the viewer. This experiential quality, coupled with appropriate supportive materials and services, will help achieve a new dimension in education.

The preceding summary of project progress, and the more detailed discussion which follows, demonstrate the extent of the Outreach commitment to devising an instructional system to serve the needs of external students at many levels. Outreach intends to identify and seek out new students and offer them counseling and guidance services to help them make the most of their educational e[illegible].

Educators and media specialists will combine their talents to design curricula which exploit the capabilities of modern communications to their fullest and provide new instructional options to students. Looking beyond the present focus on open-circuit television, the Outreach Task Force is beginning an organized effort toward more intelligent and widespread use of educational technology, with particular emphasis on programming for cable television, computer instruction, use of video tape recorders, and possibilities of satellite broadcasting.

Together, administrators from the three segments of higher education are working to coordinate services in the context of their respective institutional structures--toward development of new and effective learning systems which can be shared by all for their own instructional ends. Cooperative activities will reduce the per capita cost and cause great numbers of students to be reached. Television, as a medium which transcends campus and classroom boundaries, will help decentralize learning and will facilitate more effective cooperative relationships between the community and the college. This is the Outreach mission.

Chapter II

Current Status

of Nontraditional Education

Project Outreach is devising means for using television as the basis of a system of nontraditional study. Since communication is always a problem, this report is prepared to assist in imparting what the Outreach Task Force is about and to describe what has been discovered so that others may benefit.

In 1971, the Commission on Nontraditional Study, headed by Samuel B. Gould, reported,

> We find a general lack of communication and a consequent duplication of effort among those individuals, agencies, or institutions engaged in or planning for nontraditional education... Everyone seems to be going his own way without regard for what anyone else is doing. [1]

An initial and fundamental task of Project Outreach in its planning stage was to identify and investigate the most significant of the many programs, proposals, and models which comprise external study today. The following inquiry into the state of the art presents these projects in a meaningful way so that Project Outreach may borrow from them as they apply to the local experiment.

The Gould Commission identifies six basic elements of nontraditional education which, when fully explored, would give an accurate picture of the scope of nontraditional study in this country:

1. Concepts from which the nontraditional educational philosophy evolves;
2. Kinds of access to post-secondary education that exist, and for whom;
3. Means by which education does or should take place;
4. Models of nontraditional education that already are functioning or are being planned;
5. Various kinds of recognition or reward for educational work completed, including external degrees; and
6. Realistic problems of finance that surround and possibly limit the pace or extent of growth of this kind of education. [2]

The numerous plans and projects under way in this country and abroad vary widely in goals and structures and in the ways they reflect the above elements of nontraditional study. In discussing some of the major programs, we can learn from their problems, successes, and failures.

The British Model : An Open University

Certainly, the most zealous project for externalizing education to fit the work habits and life styles of its students has taken place at the Open University in

Great Britain. Although its method of operation and organizations structure have not been precisely imitated here, the Open University has provided much of the impetus for American external degree programs. For these reasons, the British system deserves attention.

The Open University is an outgrowth of Labor Party Leader Harold Wilson's proposal in the mid-1960's for a "university of the air." Wilson believed in the principle that "the values of a traditional university degree should not be destroyed, but rather made available to everyone seeking them." [3]

An advisory committee of outstanding British statesmen and educators set forth the basic shape of the Open University in a White Paper published in 1966. It acknowledged that while Britain had a substantial higher education network, present universities were "insufficient to the need because they were too restrictive in admissions, with classes inconveniently scheduled for adult students and unsuitable in method of preparation." [4] The Committee argues for imaginative use of new teaching techniques and teacher-student relationships, for an open university providing degree courses as rigorous and demanding as those in existing institutions but available to a far larger and more diverse student body.

In January 1971, the Open University opened as a full-fledged institution with a royal charter, degree-granting power, teaching and research arms, a complete academic and administrative staff, a network of local study centers, and a set of first-year university courses. Headquarters were established at Walton Hall in Bletchley, on a 70-acre site an hour from London near the new town of Milton Keynes. The Open University began with 25,000 students, selected on a first come-first served basis, with some attention paid to balancing enrollment in various regions and areas of study.

By the end of that first year, 14,667 people had passed examinations and gained one or two foundation course credits. Dropouts numbered only 25 per cent, far fewer than expected, and far fewer than in traditional British universities. [5]

The Open University sets no formal requirements for admission except that students be over 21. At the undergraduate level the B.A. but not the B.S. is awarded, even though students may pursue science-oriented fields of study. This system gives students greater freedom to select courses and, in minimizing customary departments, tries to incorporate an interdisciplinary approach. The Open University maintains the traditional British distinction between "ordinary" and "honors" degrees, the latter awarded for eight units (i.e., courses), the former for six. Higher degrees will later be given for advanced study and research beyond the B.A., but initial focus is on the undergraduate degree.

Twelve regional offices oversee the approximately 280 study centers, with facilities for viewing programs, meetings, tutorials, and general student gathering. Counselors are available to advise students, and class tutors conduct seminars. Study guides are distributed to all students explaining rules and procedures and advising how to succeed in independent study.

Areas of study include social science, mathematics, science, arts, technology, and educational studies. Foundation, second-, third-, and fourth-level courses are planned in each area. Foundation courses are responsible for translating the Open University's egalitarian aspirations into academic terms. They appeal to a broad range of adult students with varying life styles and study habits, yet provide depth and breadth of coverage worthy of high-quality university courses and

bring them to a common level of understanding. In short, foundation courses "must be far more educationally productive than anything yet put together at traditional universities." [6]

Each course consists of 36 segments of work presented weekly via radio, television, and correspondence and an extra one-week resident summer session. Programs are broadcast in early evenings to correspond with the hours of local study centers and are repeated weekend mornings. An Open University student is expected to spend ten hours per week per course utilizing mailed assignments, texts, audio cassettes, and weekly TV and radio programming. Grading is based on correspondence assignments, evaluation of summer session work, and final examinations. Open University scheduling is still fairly rigid in the sense that exams must be taken at prescribed times at a course's end.

Open University's reliance upon new media, especially radio and television, for instruction is reflected in the central position of radio and television production experts and educational technologists working closely with educators. Governing entities boast diversified membership, including educators, heads of other universities, BBC representatives, faculty, and national figures affiliated with no particular institution.

Open University claimed at the outset that the plan would be less expensive to both the nation and to the individual student than traditional university education. Although predicted economies cannot be achieved until the Open University's full strength of 40,000 students is reached in 1973, the experience so far substantiates predictions.

The American Scene: Models for External Degrees

The California State University and Colleges Commission on External Degree Programs released a paper in 1971 on "Various Models for External Degree Programs." [7] The commission distinguished ten categories of external education; and while they are not mutually exclusive, they provide a useful framework for our discussion of experiments in this country.

Examination and Certification: Noninstructional

A program in this model prescribes no formal course of study. Learning centers may be available in some instances, but not in others. Degrees are based on comprehensive written examinations and a written thesis. The Regents of the State of New York, for example, began granting a Bachelor of Business Administration degree in this manner in 1972. The Regents External Degree Program, supported through Carnegie Corporation and Ford Foundation grants, awards undergraduate degrees to persons who possess knowledge and abilities equivalent to the traditional Business Administration degree recipient. The Regents use some standardized exams, including College Proficiency Examination and CLEP. [8] Learning centers are made available for tutoring, self-study courses, and audio and video tapes.

Examination and Certification: Instructional

A program using an instructional certification model was under proposal in 1971 by the International University for Independent Study. Faculty and students would together work out specific academic requirements. A subordinate "college of individual learning" would offer instruction *via correspondence*, though examinations and degrees would not be limited to students using correspondence. Fields of study include humanities, social science, sciences, mathematics, and business administration.[9]

Independent Study with Periodic Seminars: No Fixed Calendar

The oldest and most established external degree program in this pattern is that of the University of Oklahoma. Elements of the program, which offers a Bachelor of Liberal Studies, include:

a. Placement tests;
b. Independent study in three academic areas and one "inter-area";
c. A three-week seminar in an academic area following course work in that area, not necessarily held on the university campus;
d. A four-week "inter-area" seminar; and
e. An "inter-area" comprehensive examination.[10]

Minnesota Metropolitan State College will open soon under this model. The cities of Minneapolis and St. Paul will be considered a campus; faculty will include people who know an area through professional expertise and are willing to teach it. Degrees, primarily in urban studies and related fields, will be awarded upon demonstrated competence.[11]

Similar programs are under way at the University of Southern Florida, Goddard College, Brockport College (SUNY); Roosevelt University and the University of Maine have adaptation of this format under study.

Independent Study with Periodic Seminars: Prescribed Curriculum and Course Calendar

The major model in this area is certainly Britain's Open University, discussed at length above. Because of the widespread recognition the British experiment has received in the United States, many American universities have built from this model as well. This is especially true of those programs emphasizing electronic display systems.

Since 1956, people of the Chicago area have been able to take courses toward their A.A. degree via television at Chicago City College. The program offers a combination of general and vocational subjects. Its primary goal is to provide further educational facilities to people unable to attend regular classes, including inmates of prisons and reformatories. It also has the pragmatic role of removing the burden of too many students in some courses on campus.[12]

Chicago TV College was the first experiment of its kind. Some courses are video taped; others are broadcast live. Televised courses are coordinated with correspondence, seminars, lectures, conferences, and telephone interaction. Students enroll personally at one of the eight campuses, which administrators believe gives a feeling of belonging. At each campus a member of the regular faculty

acts as TV coordinator. The final examination for each course is taken at the main campus.

Six groups of subjects are presently taught: general education, arts, languages, vocational training, teacher training, math and science. As of 1967, 75 courses had been offered on television. Each term courses are selected to appeal to three student groups: those aiming for an A.A. degree or vocational certificate; students planning to go on to a teachers college, or present teachers; and noncredit students wishing to broaden their education or attain vocational training. In 1968, Chicago TV College had 5,429 credit students and 2,240 noncredit students.[13]

The State University of Nebraska (SUN) is about to embark on a new concept in higher education along these lines. Its objective is to offer first- and second-year college courses for credit via television, audio and video cassettes, films, tests, and other means of communication. Citizens of all ages, unable to study in residence on campuses, will be able to take courses, with regional resource centers available for assistance. SUN credits will be transferable to the college of the student's choice. Instruction was scheduled to begin in January 1973. [14]

Another project close to the British model is the proposed "Open University of Massachusetts," submitted to the State Legislature by Governor Sargent. The Massachusetts experiment is still under consideration as of this writing.

The State of California has been a leader in exploring the value of television in external degree programs. Given the extensive state-wide network of institutions of higher learning, efforts are primarily on a regional basis. These will be examined further in a later section.

One experiment which merits attention in the present discussion is the Community Access Education (CAE) program at California State University, San Diego. Funded by the College Entrance Examination Board and its Educational Testing Service, CSUSD, along with the University of Houston, the University of Maryland, and Rutgers University, offered an Open University Foundation course in Fall 1972 to test the instructional viability of the British system for American students.

The CAE program offered concurrently a three-unit upper-division course taught by a regular faculty member in the conventional way, except over television. In addition to being a quality course in its own right, it offered a comparison with the British-designed sequence. It is meant for a different type of student than the Open University course--primarily persons desiring to update their professional teaching expertise. Furthermore, since the course was originally designed for another campus within the state college system, it tested the efficacy of intercampus use of courses within the system.

The CAE concept utilizes mixed-media instruction, including open-circuit television, correspondence, radio, cable communication, telephone feedback, and tutorials. Televised courses are repeated during the spectrum of the day so that each student may fit his study period into his own daily activity. All weekly lessons are repeated on weekends for additional reference or make-up.

CAE hopes to reach four main types of students:

1. The student who for reasons of time and money cannot otherwise undertake higher education;
2. The student returning to the labor market with a professional expertise

and who wishes to update himself;

3. The advanced placement high school student counseled to accelerate his educational program; and
4. The student regularly enrolled in an institution of higher education who wishes to use this method of instruction. [15]

As Project Outreach moves into its operational stage, no doubt the system will incorporate many features of the CAE program; the two efforts are alike in their respective aims to externalize the educational process. The author of the CAE project application was certainly looking ahead when he wrote,

> ...If the Community Access Education program provides certain attributes and contributions to the educational process, in the San Diego and subsequently in the Orange County areas, a further step would be to enlarge the program to encompass the State of California where campuses of the three systems of higher education in the state are located. These several communities may be connected by means of public television and radio, intrastate networks, and by interconnecting the several hundred cable systems operating within the state. Following this stage of the Community Access Education program, major determinations concerning the directions of higher education in California can be considered. [16]

Independent Study: Individually Tailored Curriculum

Bard College is presently engaged in a pilot program for 12 students using this model. Students must have completed two years of college or their equivalent and be over 23 years of age to participate. They plan their programs in consultation with a faculty adviser and work toward their degrees either at home or in conjunction with their jobs. [17]

A "University Without Walls" pilot program of individually tailored curricula was also announced in September 1972 by California State College, Sonoma. Psychology students in the program will be permitted to earn an M.A. degree on the basis of examination of their qualifications instead of a tally of courses. Students work with a CSC faculty adviser, but most instruction is through "adjunct professors" drawn from local professional psychiatric and psychological staffs. The M.A. degree is awarded on the basis of a comprehensive oral examination and a review of the student's "portfolio of documentation"--including letters of reference, academic transcripts, interviews, class and therapy sessions, case reports, and so forth. [18]

Group and Independent Learning Intermixed: No Fixed Curriculum

The best-known experiment of this type is the University Without Walls (UWW), sponsored by the Union of Experimenting Colleges and Universities (UECU) and headquartered at Antioch College. It was founded in 1970 by the United States Office of Education and received subsequent grants from the Ford

Foundation and UNESCO. Its major premise, in the words of its President, Dr. Samuel Baskin, is "that individual students are more important than standardized institutions and structures." [19] UWW programs are organized at 20 colleges and universities providing "an alternative form of higher education, uncircumscribed by time or space, individualized and flexible." [20] As of Spring 1972, 3,000 students were enrolled.

Participating institutions are large and small, public and private, intercity and rural, mostly black and mostly white, two-year and four-year, secular and nonsecular. They can be found all over the country. The UECU is chartered by the State of Ohio. Thus, the Union as a consortium can grant its own degrees. Many participating institutions plan to confer a UWW degree with the option of taking an institutional degree as well.

Each UWW school develops its own program with the following basic components:

1. A broad "mix" and age range of students (they ranged from ages 17 to 60 in UWW's first year);
2. Involvement of students, faculty, and administration in designing and developing each institution's UWW unit;
3. Special seminars and similar programs to prepare students and faculty for the UWW experience before they begin;
4. Flexible time units--each student with his adviser formulates an individualized program without conventional concern for campus residence, grades, or credit;
5. Broad array of resources available--classroom instruction, field seminars, internships, independent study, individual and group projects, telelectures, video tape, programmed learning, travel;
6. Use of professional "adjunct faculty" (250 of them in UWW's first year) and seminars-in-the-field so students may benefit from their skills and experience;
7. Opportunities for students to use resources and facilities of other UWW units; and
8. Concern for both cognitive and affective learning and devising new ways to measure student progress. [21]

Admission criteria are in some cases open; in others, selective. Selection is not based on grades and test scores, however. Rather, students are selected according to motivation, creativity, independence, job history, and previous life experience. After admission, students go through an orientation process as mentioned above.

Each student works with a teacher/adviser in planning, development, and evaluation of his program. He draws from an Inventory of Learning Resources to design a program appropriate to his learning objectives. Tied to no fixed time schedule, he plans his experience around a time frame best suited for his needs (e.g., 6 months, 1 year, 18 months, etc.). Usually, students plan their programs so as to take advantage of a combination of learning opportunities.

Some kind of cumulative record of learning plans and objectives is required of each student for purposes of evaluating his educational experience. He meets with advisers periodically to assess his activities, plan subsequent phases, and determine criteria for award of degree. The student's culminating requirement is a

"major contribution" reflecting his learning. A final evaluation is made by a review committee of faculty, students, and other persons with whom the student has been working. [22]

The United States Department of Housing and Urban Development (HUD) has recently embarked on its own UWW program in National Urban Studies. Major participating institutions include the University of Tulsa, Southern Illinois University (Edwardsville), University of Northern Colorado, Central Michigan University, and Manatee Junior College. Institutions develop these UWW programs at their own expense. Students include full-time employees of state and local governments, federal employees in the United States and abroad, and military personnel. HUD's UWW program "takes education to the student wherever he may be" and has done so in Asia, Africa, Europe, and Latin America. [23]

The HUD program offers a flexible educational format including seminars, on-the-job training, work experience, and use of educational technology. Credit is also given for life experience and challenge of courses through examination. Studies lead to B.A., M.A., and six-year certificates (doctoral less dissertation). Programs can be established in any community, with seminars and workshops (some two- or three-day, some one-week), held in local facilities. Instructors are drawn from throughout the nation and from academic, government, and private sectors. Counselors make regular visits to program sites, with tutorial and research work done in an agency environment. Other means of instruction include team and individual teaching, programmed learning, tele-teaching, and lectures on cassette tapes. Transferability of credit is assured among participating institutions.

HUD anticipates that this approach will make low-cost college instruction available to thousands of state and local personnel and will appeal particularly to minority and disadvantaged persons wishing to enter public employment. Six thousand students in 20 states and overseas were enrolled in 1971; HUD expects this number to have doubled in 1972.

Programs are offered in Urban administration, Codes and Zoning, Urban and Regional Planning, Social Services for the Inner City, Urban Sociology and Economics, Urban Design and Architecture, and Housing Management. Especially noteworthy in this system is the fact that only 15 administrative employees run the UWW program for over 6,000 scattered students. A Director reports to the Chancellor at each institution; programs are administered on the basis of delegated authority. [24]

Group and Independent Learning Intermixed: Intermixture of Prescribed and Unstructured Curricula

Empire State College, a member of the SUNY system located at Saratoga Springs, New York, is the chief representative of this model. Students earn degrees without attending specific, structured courses at a specific campus. Supported by Ford Foundation and Carnegie Corporation grants, Empire State began development in 1971. As of Spring 1972, 120 students were enrolled in A.A. and B.A. programs. The college is expected to eventually serve 10,000 to 20,000 students (1973 goal: 3,500). [25]

An Empire State student works with a faculty mentor attached to the Area Learning Center (one of eight) nearest his home. Together they formulate a program of study incorporating both the individual goals and "commonly expressed goals of a liberal education." A student may demonstrate successful progress to achieve "the equivalent of an appropriate number of semester hours" by any combination of the following means:

1. Independent study;
2. Completion of studies through combinations of newer educational technologies; or
3. Completion of studies at one or more SUNY campuses or other institutions (the network has 70 existing campuses). [26]

As SUNY system Chancellor Ernest L. Boyer emphasizes, Empire State works to distinguish *learning* from *location*.

Instructional resources available to the student include correspondence, tutorially guided independent study, educational television, cassettes, media supplements, examinations, and experimental study, as well as optional classroom work. Credit is also awarded for job experience, volunteer activity, apprenticeship, and other arrangements, including travel. The student's program is reviewed and approved by other faculty members; when the agreed-upon work is completed, he receives his degree.

In another part of the country, the Mandala program at Mundelein College in Chicago offers a similar model for external education. A student may combine regular courses, independent study, apprenticeships, travel, and related work experience in a program reflecting his own concept of contemporary education. He designs his program and submits it to Mandala (a group of Mundelein students and faculty organized for this purpose) for approval. Mandala students earn a B.A. from Mundelein, but apart from the parent institution's general degree requirements. [27]

Some institutions have this model in mind for external degree programs still in the study and planning stage. Ohio University is one of these, striving for flexibility within University guidelines. In December 1971, a committee was formed with representatives of faculty, administration, graduate and undergraduate students, and community to study existing nontraditional models and develop a proposal for a state-wide extended learning program.

This report, released in June 1972, proposed that a new academic unit be created within Ohio University to develop and administer programs with degrees awarded by the college and faculty of the appropriate department. Eventual separation of Extended Learning from the rest of the University was recommended, giving the new entity its own charter from the State Board of Regents. [28]

A pilot study was to be planned and implemented during the 1972-73 school year. Students with a high school diploma or equivalent were to be eligible for admission. Two learning centers were to be established--one urban and one rural--to be operational in Fall 1972. They would give the nonresidential student easier access to higher education resources. Advisers would be on hand to assist students in setting and pursuing their goals.

The committee recommended a wide variety of learning experiences. Flexible learning modules would include independent study, correspondence, TV lessons, internships, field experience, seminars, credit by examination, classroom study, and credit for learning through past experience. Evaluation of student progress would be by conventional examination methods and also by nonconventional means as developed in the pilot study. The system would be constructed so as to assure complete transferability of credits. Fees would be charged as for part-time students, since external students would not be taking advantage of the campus services and activities paid for by the general fee.

System-Wide Degree: Option of Courses from Any College System

This category best reflects the ultimate goal of Project Outreach and many other external degree programs in California. For example, the City University of New York has recently established a new B.A. degree program approved in which students design an individual curriculum under faculty supervision. They are free to select courses at any of the University's colleges, rather than being restricted to the one at which they are registered.

Syracuse University is involved in a 20-month study of external degree possibilities; and a perusal of their *Newsletters* suggests that, aside from the local emphasis on television, this experiment most nearly parallels Project Outreach. Early in 1971, under a Ford Foundation grant, the Syracuse University Research Corporation "set out to design a comprehensive system of extramural, post-secondary educational opportunities for central New York--focusing initially on external degree options." [29] The study worked at drafting a preliminary design of a regional external degree system involving both public and private institutions and agencies in five counties of central New York. The pilot degree will be Business Administration, with the State Education Department developing evaluation instruments for student performance.

At an August 1971 meeting, representatives of 12 area colleges and universities concluded that interinstitutional cooperation on questions of academic standards and qualities was essential to a successful program. In the months that followed, a regional degree-planning consortium was established, with representatives of 14 area institutions. The group studies such questions as:

1. Developing a "talent bank" of human instructional resources in the community;
2. Developing counseling and testing services;
3. Setting up the external curriculum for the pilot Business Administration degree;
4. Problems of student/faculty interaction in external programs;
5. Means of evaluation and feedback;
6. Relating planned learning experiences to life situations. [30]

One system-wide enterprise, though not specifically or exclusively college degree-oriented, deserves mention because of its unique comprehensiveness. That is the Nebraska Educational Television Network, which began with the creation in 1963 of the Nebraska Educational Television Commission and today includes a nine-station system reaching into every corner of the state. Approximately 50 per cent of the network's broadcasting is devoted to instructional programming, offering telecourses from preschool through college. [31]

It has been said of the recently completed Nebraska Educational Tele-communications Center that it is...

> ...the first such facility in the country designed to bring under one roof total educational communications capabilities...It is for the first time possible to produce, duplicate, and distribute every form of instructional technology: broadcast television, closed-circuit television, TV cassettes, programs for cable TV, audio recordings and originations, audio cassettes, color and black and white films, filmstrips, photographs, all forms of art and graphics, as well as printed material. [32]

The prime objective of Nebraska's ETV Network, offering the state's viewers an opportunity to learn in areas of the humanities, sciences, arts, vocation, and leisure activity, is pursued through four nonprofit agencies--two involve programming for elementary and secondary schools, one for nursing instruction, and one for higher education.

Instructional programming at the college level is handled by the Nebraska Educational Television Council for Higher Education, Inc. (NETCHE). Described as "the nation's first state-wide, all-inclusive collegiate educational television compact," NETCHE is composed of 16 member colleges and universities, public and private, in Nebraska, and eight associate members in six other states. Its objectives include:

1. To provide for the sharing by television of specially talented faculty, personnel, and instructional resources; and
2. To assist members in local applications of broadcast and closed-circuit instruction. [33]

The group uses supplementary, enrichment, and topical materials as well as complete courses and multiple lesson instructional sequences. It has developed some 700 lessons for members' use, and a centralized library service makes materials conveniently available to all.

Costs of producing and/or acquiring programs, and associated costs of broadcasting on the network, are defrayed by an annual assessment from member schools. At present, no state assistance is provided, but much preparation has been funded through Title III of the Higher Education Act.

The State of California, as indicated earlier in this study, is replete with studies of system-wide external degree proposals. In 1971, the President's Task Force on the Extended University published results of its 18-month study of ways of increasing opportunities for external students in the University of California system while maintaining university quality in their implementation. It proposed that "new curricula...be designed to allow for the special kinds of experience, motivation, and goals of part-time students." [34] The University proposed to confine instruction to upper-division and graduate levels, making degree requirements "at least as demanding" as existing ones but using a variety of evaluation procedures. Sympathetic consideration would also be given to the transfer of degree credit, especially among University of California campuses and University Extension.

The Task Force recommended that instruction make substantial use of independent study, correspondence, and new technology, while at the same time insuring opportunities for personal interaction with other students and faculty. Existing campus facilities as well as off-campus Learning Centers would aid in this effort. The Task Force wrote, "Use of television in extended degree programs should be considered as part of the total learning system, to be used in conjunction with other media and materials where appropriate." [35] Other technologies under consideration include auto-tutorial instruction (cassette), dial access, computer instruction, and film.

Ultimately, the Task Force proposes that a University-wide campus consortium known as "New College" be created. It would research and develop new programs, direct students to appropriate curricula, and establish state-wide off-campus Learning Centers. The consortium vehicle would also act to facilitate intercampus transfer of degree credit.

The California State University and Colleges' Commission on External Degree Programs identifies several purposes of external degrees within the CSUC system:

1. To offer instructional opportunities leading to degrees and professional certificates to Californians for whom they are not now possible because of inability to spend extensive periods of time "in residence" on campus;
2. To enable students who have completed lower-division work through Community Colleges to complete work toward Bachelors and Masters degrees, through programs designed to meet their needs;
3. To enable dropouts and stop-outs to continue academic work on a part-time basis while employed; and
4. To experiment, within the flexible Continuing Education structure, with models of instruction which, after evaluation, may be useful to regular campus programs as well as to external education. [36]

In the early years of external programs, traditional teaching-learning models will probably be used widely. Innovative means of instructional delivery will be tried in pilot projects. Attention will also be given to evaluation designs, diverse majors, staffing methods, and approaches to financing.

Commission Chairman Thomas H. McGrath has encouraged formation of state-wide regional consortia for joint instructional efforts. For example, instruction could be offered in professional programs for state agency personnel with uniform curricula from Crescent City to Chula Vista. This approach has also been taken as the following examples demonstrate. California is the scene of several programs using television for instruction on a regional basis. The Southern California Consortium for Community College Television, which began in 1967, today involves 24 community colleges from 18 districts and serves Kern, Los Angeles, Riverside, and Orange Counties.

Each participating institution pays a $3,000 annual assessment to cover costs of operation; contributions from other sources increase the total funds available. No fees are charged to students enrolling in TV courses only; their only expense is for supplementary printed materials. However, on-campus students are required to pay the regular fees at their college of enrollment. Every course is not necessarily offered by every institution; students are informed in registration brochures at which community colleges they can receive credit.

Television courses are offered for two and three units, consisting of 30 and 45 half-hour lessons, respectively. Texts and syllabi are assigned with occasional additional readings. Midterm and final examinations are the only required on-campus activities. Seven TV stations altogether have aired courses for the consortium. They are both commercial and educational, and most recently include Channels 50 and 58, new stations on the Golden West and Los Angeles City College campuses, respectively.

An "instructor of record" at each college for each course normally has two or three meetings each semester with TV students. His campus pays him for a few additional office hours per week. Registration is handled at the individual schools, using their standard procedures. The school responsible for producing each course generally holds the copyright to materials, but they are made available at no cost to other consortium members.

In July of 1972, about the same time Project Outreach got under way, the Northern California Regional Instructional Television Consortium also received a Title I grant to develop a similar program in the northern part of the state. The consortium includes eight state colleges and universities, additional community colleges, and participating ITV agencies and anticipates serving the continuing education needs of approximately four million people. Its stated purpose:

> ...to bring together the State Colleges, the Community Colleges, and Regional Instructional Television Agencies in a common effort to develop the full potential of television as an educational delivery system capable of turning homes in rural and urban communities into college classrooms, and thereby make the resources of higher education more effective weapons in the battle against poverty, unemployment, social and environmental debilitation, and individual inabilities to cope with the exigencies of life in a more responsible and effective manner. [37]

In its first year, the consortium aims to establish a "strong coordinating organization to ensure broad-based interinstitutional academic planning," and to determine the educational needs of target populations and situations where television is a promising instructional vehicle. It intends to develop continuing education programs emphasizing career development and improving quality of life through courses in such areas as health, ecology, and consumer education. Thus, depending on audience need, courses will not necessarily be oriented toward degree goals. In its second year, the consortium hopes to implement pilot broadcasting throughout the Northern California region, assess the program's educational effectiveness, and plan for ongoing service through the consortium approach.

Although the Northern California project differs slightly in structure and emphasis from Outreach, there are important similarities in philosophy and goal.

Regional Campuses

California State University, Chico, in Northern California has regional campuses at Redding, Marysville, and Susanville--each 50 to 85 miles from the home campus. Extension credit and off-campus summer session credit are combined to enable community college graduates to complete their upper division work through regional campuses. Local community college campuses cooperate by providing classroom and library space, counseling and guidance services. At present, a B.A. in Public Administration is the only major offered, but California State University, Chico, plans to increase available majors based on a market survey. [38]

Similar projects include the Civic Center of Santa Ana, where, under the auspices of California State University, Fullerton, a Master's degree curriculum has been started. Newly authorized is an M.B.A. degree program to be operated in a major Torrance financial center by California State College, Dominguez Hills. As Chancellor Dumke has noted, "In each case the external degree program opens a new world to students who thought their opportunities were gone by." [39]

Weekend and/or Evening College

This concept involves establishment of a weekend/evening cluster college with its own curriculum, faculty and student body--though normally a branch campus of a parent institution. The college would offer a limited number of majors, with programs offered over a several-year period to enable students to complete degree requirements.

In the State Colleges, a weekend college could operate either through extension or the regular academic structure. A prototype Weekend College, in which courses are being conducted on Friday nights, Saturdays, and Sundays, was initiated in February 1972 at CSUSD's Imperial Valley campus. It permits far-flung students in this desert region, who otherwise lack the time, to make the trip to Calexico for instruction.

Perhaps even greater potential exists in a Weekend College plan submitted by California State University, Long Beach. As the largest campus in the State College System, putting Long Beach on a seven-day-a-week schedule is an undertaking of considerable magnitude.

Conclusion

Television, in its many forms, offers another valuable means of assuring full opportunity in education. Project Outreach has chosen to build an instructional system around this medium to reach Southern Californians in multilocations with college instruction. Outreach represents a system designed to make higher learning available to everyone, regardless of age, location, occupation, or academic ability.

PROCEDURAL DIAGRAM OF EXECUTIVE RESPONSIBILITIES

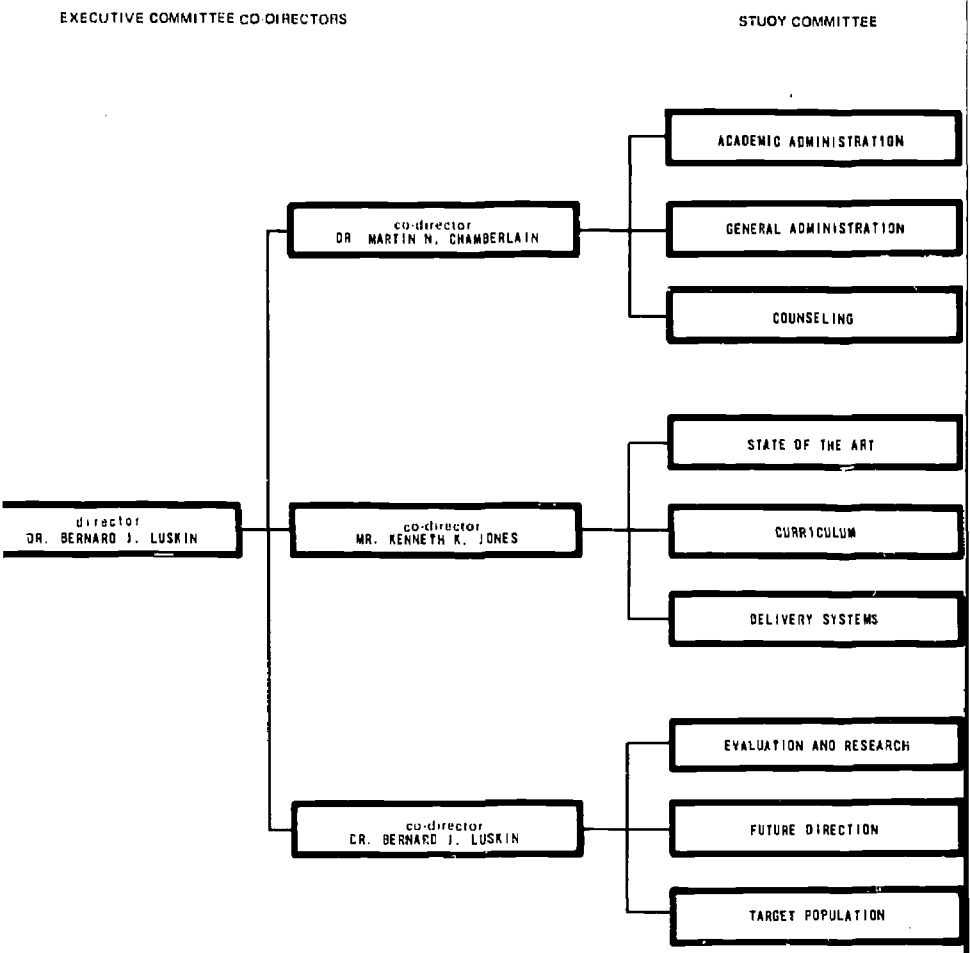

Figure 3

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Chapter III

Target Population

In 1970, James W. Trent, of the UCLA Center for the Study of Evaluation, prepared a study dealing with the decision to go to college. Contemporary American society, observed Trent, contains both opportunities and problems in its complexity. Trent believes

> America's citizens must be unusually enlightened and competent in order to both make appropriate uses of its opportunities and to deal with its problems. It is quite possible that universal higher education has become a major means, if not a prerequisite, for such a citizenry. [40]

It is, therefore, not only commendable but essential that higher education be provided for all who can profit from it.

The primary goal of Project Outreach is to extend educational opportunities to persons now denied them or who choose not to participate for a variety of reasons. The target population, in this sense, includes all segments of the public which do not now enroll in available higher education institutions. Educational opportunities typically offered by all levels of higher education include extension work and evening college study as well as full- or part-time attendance during the day. Students attending these institutions comprise another set of target populations.

But merely making educational substance more available to these populations is not enough. It must be done with attention to people's educational needs, and also to the social and psychological factors which influence people's decisions whether or not to pursue higher education achievement.

Identification of a target population thus takes place on two levels. First, we can specify member-types, listing classes of individuals which are presently outside the academic mainstream. But it is equally important to recognize the reasons for attendance, dropping out, and nonattendance at college. The multitude of personal and environmental variables which come into play must be dealt with to truly change people's attitudes about the necessity and relevance of higher education for them.

Typical Member-Types of the Target Population for Instructional Television

Since Project Outreach aims to bring higher educational substance to persons now outside the academic mainstream, the Task Force suggests the following types of persons should be included as target populations.

1. The homebound.
   a. The physically handicapped.
   b. Those restricted to the home by reason of actual or perceived responsibility.
2. The aged or retired.
3. Persons who, for a variety of reasons, choose not to enroll in traditional institutions of higher education.
   a. Persons who have had some college but had to stop in order to raise a family or pursue a career and now want to complete a degree.
   b. Persons who never attended college and now--10 to 20 years later--wish to do so.
   c. Persons who may have had to leave college in order to go to work or to serve in the armed forces and now desire to return to obtain a degree.
4. Workers barred from higher education for economic and occupational reasons.
   a. Those who would like to take advantage of university resources, or those of the state colleges or community colleges, but cannot afford the cost of attending in the usual manner.
   b. Those who are restricted by the hours of the day during which they must work or sleep.
   c. Those whose work schedules vary erratically or periodically, such as those of police officers, firemen, and others whose work schedules change from month to month or week to week.

   These workers would desire college-level work as a means to exploring new professions, to upgrade occupational and professional skills, and as a means to broaden their intellectual horizons.
5. Persons who lack transportation to and from institutions of higher education.
6. Persons too isolated geographically to obtain reasonable means of transportation to and from institutions of higher learning.
7. Persons who are now enrolled as students, including:
   a. Those of pre-college age who would benefit from college education experience as a supplement to their primary or secondary schooling.
   b. Currently enrolled college students who could benefit from additional opportunities for learning offered by institutions other than those which they are attending.
8. Persons who are sociologically or psychologically barred from participation in higher education. Social barriers might include unemployment, family and peer-group pressures, and cultural environments which mitigate against regular participation in programs of higher education and for which extention or correspondence study often is also inappropriate.

The Task Force does not limit the definition to the member-types listed above, or to any other single student group. As explained in Chapter VII, participating institutions will compare initial enrollments with both the suggested member-types and with conventional full-time students. Nevertheless, an important element of the ongoing Outreach effort will be to identify specific target populations in given areas, in terms of their own higher education needs. Curri[illegible] then be designed appropriate to meeting those needs.

Factors Governing College Attendance

Clearly, a myriad of interrelated variables contributes to a person's motivation to continue his education. Although Trent's study of these variables focuses primarily upon college-age youths, his compilation of factors associated with college decision-making is nevertheless apropos to Project Outreach.

Trent observes,

> The determination to enter college is not generally a spontaneous decision, but rather [is] the result of numerous complex factors that have occurred over a long period of time, from early childhood to the point of conscious intent to enter college, and that continue to contribute to persistence in college. [41]

A summary of selected factors in individual aspirations and their implications follows:

1. Socio-economic status is a complex environmental process in college decision-making, of which financial status per se is only a part. It is centered in the family but includes peer groups, school, and community. It conditions the nature of all academic and nonacademic experience which contributes to educational aspirations.
2. Motivation is the catalytic force underlying the decision to attend college. It consists of need or desire, accompanied by the intention to attain a goal that will satisfy the need. It originates and is observable from an early age, as a person responds to and interacts with his environment.
3. Parental influence is primary in educational and vocational decision-making. Middle and upper class parents foster achievement and motivation to attend college in many ways, while characteristics more frequently associated with lower socio-economic level parents have a negative effect on achievement and aspiration.
4. Peers have an important influence on educational decisions as well, though students who are more peer-oriented are generally less college-oriented. Encouragement from both peers and parents is likely to result in a positive decision regarding college.
5. Religious background and minority status represent subcultural presses on decision-making. In California, the latter factor probably has greater impact. Members of Black and Mexican-American minority groups are saddled with a second-language problem, substandard living conditions, and values which are incompatible with middle class prerequisites and norms for academic achievement and motivation. These hurdles must be overcome to improve the individual's chances for success in higher education involvement.
6. Schools themselves, though capable of exerting a positive influence on academic achievement and aspiration, are generally neutral or negative in influence. This is unfortunate, especially where teachers reinforce handicaps and negative self-images of minority students by their own prejudgments, and where they insist that minority students conform to a middle class world that is not part of their home environment.

Project Outreach could do a great service to minority group members by offering them educational substance outside the rigid confines of traditional academic programs and procedures and by providing them with assistance and motivation through counseling programs designed with their needs in mind.

7. Community characteristics affect educational decisions. The community as a whole can be influential, especially in the case of areas with a large population of professional workers or with easy access to inexpensive colleges. San Diego and Orange County are blessed with these resources; they need now to be further extended to heretofore neglected populations.
8. Educational decisions are also vocational decisions, as persons who enter college generally do so for more or less vocational purposes.
9. Decision-making is group-rooted and can change best in group situations. The individual gauges his values and behavior according to the basic groups with which he identifies, and decisions are made and carried out most effectively when supported by the group. A challenge to off-campus learning systems is thus to encourage and reinforce the decision to enter college. Project Outreach will take giant strides forward if it can extend its counseling and guidance efforts to individuals who need such reinforcement.

Motivations of a Target Population

To answer questions related to how higher education institutions can design curricula for new delivery and study systems, we must consider the motivations and interests of a target population. In the Syracuse University newsletter, *Continuing Education for Adults*, results of a survey by Stanley M. Grabowski on "Motivational Factors of Adult Learners in Directed Self-Study Degree Programs" were recently published. The analysis of motivational data revealed seven factors influencing adults to enroll in the program:

1. The desire to know--learning for the sake of learning, to satisfy curiosity.
2. The desire to reach a personal goal--gaining knowledge to make possible the achievement of a personal goal.
3. The desire to take part in social activities--enjoying companionship or fellowship regardless of particular knowledge gained.
4. The desire to reach a social goal--gaining knowledge to enable the individual to contribute effectively to improving society.
5. The desire to escape--wanting to escape from an unpleasant or tedious activity or situation.
6. The desire to study alone--enjoying individual study and meeting the change of self-direction.
7. The desire for intellectual security--holding one's own intellectually in conversation.

Grabowski found significant differences among enrollees' motivation in the following areas:

1. More women than men enrolled for the desire to know and the desire to study alone.

2. There was a greater tendency among the unemployed to enroll for the desire to reach a social goal.
3. Younger respondents were more likely to enroll for the desire to reach a personal goal.
4. Those without previous college credits tended to enroll for the desire to escape and the desire to know.
5. The lower the level of income, the greater the tendency to enroll for the desire to reach a personal goal, the desire to reach a social goal, and the desire to study alone.

It was noted above that socio-economic and consequent motivational factors play a significant role in determining whether or not an individual chooses to pursue postsecondary learning of *any* kind. Once motivation has been cultivated in new students, it is particularly important that course materials live up to expectations—both in terms of content and production quality.

Chapter IV

Counseling

Most educational institutions realize that counseling is a primary element of any successful educational program. When a consortium organization has an off-campus orientation, there is a great need for translation of curriculum to students by informed personnel. The nature of the Project Outreach target population, and the Project's externalized course offerings, clearly indicate that a counseling component is important.

As the Task Force Committee on Counseling contacted various television consortia around the country, it found that a few of their respective counseling components offered traditional kinds of counseling services; yet, in many instances, they served nontraditional kinds of students. The Outreach Task Force views the target population as having unique and specific needs and wants to respond to those needs with services which would, like the television courses, "reach out" to the community.

A well-known dictionary of psychological terms defines counseling as:

> "A relationship in which one person endeavors to help another to understand and to solve his adjustment problems. The area of adjustment is often indicated: educational counseling, vocational counseling, social counseling, etc. The term covers a wide area of procedures: advice giving, psycho-analysis, information giving, interpretation of test scores, encouraging the counselee to think out his difficulties...etc...Everyone occasionally undertakes counseling but the word counselor is preferably restricted to professionally trained persons." [42]

The concept of providing educational opportunities to large audiences through television contains a multitude of peripheral responsibilities. Among the target population there will be a variety of students. The two most obvious categories are those taking the class or viewing the program for personal enrichment and those planning to use it for a two- or four-year college degree in a particular field. Thus, it is essential that information and services be provided that relate television instruction to present goals and aspirations of potential students. These services can be provided in two integral functions. Information concerning academic and/or vocational opportunities will be made available and disseminated through a variety of sources, of which television will provide the main thrust. The second and most vital component will be a methodical and systematic counseling program designed to assist students who desire to relate television instruction to their present goals in one of the institutions associated with the consortium.

The counseling component of Project Outreach is exploring the following functions in its continuing study of the counseling model which will emerge.

1. **Information-giving or advising functions:** That aspect of counseling which provides students with course and institutionally related information (e.g., what courses or programs are available, which colleges are offering these courses, and where they are located).
2. **Diagnostic functions:** That aspect of counseling which provides students with help in making educational/vocational decisions (e.g., what major to follow in order to realize a specific goal, assistance in making a career choice).
3. **Skill-building functions:** That aspect of counseling which anticipates student needs and reacts to student feedback concerning re-entry problems associated with a return to school in terms of learning support programs (e.g., orientation programs; math, reading, writing skill-building courses; psychological support programs).

General Guidance. The task of extending educational guidance and counseling into the communities served by Project Outreach is an opportunity to innovate. In bringing new students into an academic environment, publicity has a high priority. Bringing information about educational opportunities to persons in the target population and encouraging them to take television courses are important.

Audiences viewing and/or students enrolled in the television consortium will be exposed to general information about all member institutions through spot television announcements and short programs. The object will be to relate practical, present application of their courses to careers and institutions. The information will include, but not necessarily be limited to, the following:

1. Name of the Institution
2. Location (Address and City)
3. Number of Students Enrolled
4. Admission Requirements
5. Programs Offered (Majors, Degrees, Certificates, etc.)
6. Specific Requirements Met by Courses Offered through Television
7. Services Offered to Students
   a. Financial Aids
   b. Counseling
   c. Testing
   d. Work Experience
   e. Tutoring
   f. Housing
   g. Placement
   h. Etc.
8. Telephone number of center where individual counseling services are available for television-oriented students.

Publicity for Project Outreach courses can also be accomplished through its inclusion in institutional catalogs, radio talk show presentations, and a newspaper column about educational opportunities for adults and returning students. For example, UCSD Extension has developed a "So You Want to Go Back to School" program which each year coordinates one-day counseling and educational advis-

ing clinics for potential adult students in San Diego County colleges, which might serve as a model for workshops involving all educational institutions in a given geographical area providing information and advice concerning Outreach programs.

Use of a van is being explored. A van may be used within target areas to provide "on the spot" information in carefully selected locations to students and potential students. Its location will be advertised in advance, and personnel will distribute printed information and facilitate access to the program to those interested. It will also serve as a satellite extension of the counseling component. People who do not view the television channel and/or do not read the advertisements can in this way become familiar with the educational opportunities available through Outreach.

Counseling Services for Project Outreach. A large number of the consortium students will have chosen television instruction as a means of achieving their educational or career objectives because of time limitations, lack of mobility, or a variety of other reasons which imply that the center of their "academic environment" for some time will be at home. Many students, in fact, will have the greatest need for person-to-person counseling *after* they become involved in taking courses--to provide academic assistance and motivation to continue their new educational experience. Counseling is particularly important to those who have had little or no previous exposure to higher education or whose attitudes toward college have heretofore been skeptical or indifferent.

Counselors with an understanding of the interaction and relative importance of those sociological and psychological variables which contribute to decisions concerning college can apply them diagnostically and "therapeutically" to assist actual and potential students in their educational and vocational planning. In order to perform this task effectively, a counseling center or "clearinghouse" is being explored. Such a clearinghouse may be established in each area served by Project Outreach. Center personnel will provide the link relating television instruction to students' educational objectives and the institutions in which they wish to pursue them. The staff will have at its command all the resources necessary to do an effective counseling job. Alternative to the center concept, counseling on the campus of each college offering the course is under study. Specific information related to telecourses may be treated by the colleges themselves. In either case, we see the need for the following services:

1. *Telephone Access.* Students and/or potential students should have immediate access to educational and vocational counseling through the telephone. This service may parallel and reinforce the concept of television instruction specially designed for persons physically unable to reach specific institutions. For those who have greater mobility, it can enable them to expedite business when a personal visit is not essential.
2. *Personal Counseling.* Appointments may be made, day and evening, for those who prefer and are able to travel to the center. The counselors will keep records of contacts and provide all informational, diagnostic, and skill-building services available to other students in collegiate institutions including the following:
   a. Information about educational options within the member institution

and nondegree approaches to vocational and personal objectives.

b. Information on educational delivery systems for full-time and part-time degree and certificate programs.
c. Information about learning support systems, and assistance in choosing options appropriate to individual needs and capabilities (i.e., library, special courses, tutoring, etc.)
d. Financial aid information, advice, and procedural assistance.
e. Dissemination of vocational and career information.
f. Placement information and procedural assistance.
g. A diagnostic program to help individuals make educational/vocational decisions.
h. Assistance in personal goal setting on an ongoing basis.
i. Test administration and interpretation including advanced placement, achievement, ability, interest and aptitude.
j. An academic support services program including orientation, assistance in building study skills and good study habits for higher education in general, and television-related courses in particular.

By helping students evaluate their educational potential, and by providing assistance in areas known to be in need of compensation, counselors can increase students' self-understanding and help them formulate their consequent educational and career decisions.

3. *Use of Computers.* A data bank component may also play an important role in the ongoing Outreach counseling task and is under study. This involves the research and development of a computer information system programmed to identify educational opportunities available to adults in the consortium areas. Essentially, the computer may be used by counselors in both the information-giving and diagnostic phases of counseling.

The data base can contain information regarding degrees: what combination of courses leads to majors or degrees in various institutions; how CLEP examinations would apply in various programs; what the transfer value is of courses taken many years ago. The counselor could request information regarding the various alternatives open to adults wanting to go back to school. An example of a typical client might be a 40-year old woman who had taken courses 15 years ago at Orange Coast College, who had taken two television courses with UCSD Extension during the last year, and who had recently taken two of the general CLEP exams. A counselor would key in the information contained in the woman's transcripts and her CLEP scores, and the computer would respond with a printout of alternatives available to her in terms of receiving a B.A. degree in a particular field. Initially, a single computer system with terminals at each consortium institution is envisioned.

In addition, the counseling needs of the target populations will be studied concurrently with the establishment of the data base. Information gathered by counselors relating to educational needs, vocations and careers, and specific problem areas will be gathered and used to build the information system. The computer would be programmed to summate the types of data being requested for future course, program, and services development.

4. *The Human Services Training* aspect of the counseling component should involve the training and retraining of individuals to serve as counselors, tutor/educational advisors, and telephone operators both at the Clearinghouse and in the community. Human Services Specialists may work directly with individuals requesting help in order to:
   a. Help the student identify his/her needs.
   b. Help meet those needs where appropriate.
   c. Facilitate access to the types of information that the student will need to solve his/her problem.
   d. Know what other resources are available to help the student and how to utilize these resources.

   The training of Human Services Specialists will place heavy emphasis on laboratory education with instruction in basic concepts augmented by supervised field experience. Such a program will bring competence to the trainees specifically in areas of interviewing, organizational functioning, and data utilization.

The guidance and counseling services described above constitute a multidimensional program into which potential students may come and go according to their own needs. This component of Project Outreach will serve an otherwise ignored student population, the existing campus population, and will develop new communication and working links between the consortium colleges.

The counseling effort is a unique opportunity to realize the true meaning of the Outreach consortium; that is, bringing together a group of cooperating institutions to better serve potential and present adult students in our communities. Counseling is an important and integral component.

Chapter V

Curriculum

Pilot Television Programs

In the initial phase of Project Outreach, the Curriculum Committee supervised the development of the two 30-minute pilot television programs produced as models of curriculum design and cooperation among the several institutions. On the basis of this experience, Outreach concluded that mutual guidance and assistance is possible in instructional design.

For the pilot video tape in Introductory Psychology ("As Man Behaves"), the production team was headed by Dr. Matt Duncan, of Coast Community College District. The San Diego curriculum group responsible for the pilot video tape in the environmental series, "Biosphere and Biosurvival," was headed by Dr. George Cox, of California State University, San Diego. Dr. Cox worked in cooperation with Paul Steen of KPBS, Channel 15, San Diego, and their production team. "As Man Behaves" is now complete and is being offered for credit by Golden West and Orange Coast Colleges, members of the Coast Community College District. It must be kept in mind, however, that the phase of Outreach just completed produced two pilot programs. The Task Force is now proceeding with the development of the courses it will offer.

Of the many elements contained within an instructional system this size (one that encompasses broadcast, correspondence, home study, tutorials, and other aspects, disseminated to a large and widely scattered audience), the visual product was found to be the integral component requiring institutional cooperation. To be sure, the televised portion of the projected system is only one part among many; but it is the most expensive and difficult element to produce.

When Outreach began, an assumption was made that if several institutions pooled their resources to provide a course for credit, this course would be completely interchangeable among other institutions of higher education. Outreach found that the ultimate end use of video products may take on many forms and delivery techniques according to institutional needs within the consortium. They may be used separately or offered as a course.

To describe learning units in terms of structured credit courses is restrictive to the extent that one might not consider alternative instructional designs; and yet it does provide a beginning for development of criteria for curriculum content selection. The first materials prepared for Project Outreach use are, as indicated, components of complete courses.

In offering courses the Task Force is impressed with cooperative planning and decision-making from the very outset of course design. Faculty who are to share in the ultimate use of a product must have input into its development.

On the basis of experience in production of the pilot films, the Curriculum Committee agreed that the following considerations were important in planning an instructional system using communications media.

Planning the Instructional System

It is important to recognize that designing curricula for media dissemination is not the task of a single instructor, or even of a single academic department. Rather, as the Carnegie Commission stated in *The Fourth Revolution,*

> As the variety of instructional alternatives for each lesson and course increases, the planning of instruction will require more differentiated knowledge and skills than most individual professors are likely to have. [43]

To design an instructional system using television and other technologies, several talents are required in addition to the teacher; curriculum development thus becomes a team effort.

The *teacher* remains the team member who best understands the subject from which content is to be drawn. He also can relate the course to other subjects; and having had direct dealings with students in the past, he knows what elements are hardest to grasp and therefore need greatest emphasis. But he often needs to be oriented to the capabilities of the various instructional media in order to create more effective instructional programs.

The *instructional technologist* is a specialist in the learning process, qualified by a background in educational, behavioral, or social psychology. His or her job is to help faculty members define the objectives of courses, plot learning strategies to be employed, and evaluate results. Attention to these matters is especially important when students may not have direct, regular interaction with either the teacher or other students. Their progress and achievement must be accurately monitored with very little personal contact.

The *media technologist* best understands the capabilities of available media. He or she has a creative role in organizing the technological resources needed for effective instruction, discerning the effective from the ineffective medium for a particular task. Areas of specialization might include computer science, electronic engineering, TV and radio technology, editing, and film or TV direction. Although such a variety of specialists may not be on a single campus' staff, their expertise can often be made available through cooperative arrangements with other institutions or on a consulting basis.

The *information specialist* guides his colleagues to information essential for the preparation of instructional materials. It is his or her job to know where the needed data, illustrations, films, slides, audio tapes, and other resources for a course are to be found. The information specialist is therefore in a key position to affect the richness and quality of curricula.

Of course, such specialized personnel may not work together 100 percent of the time, and the full range of expertise may not be required for every course or project. The professor most often would be on his own in planning, but calling on others for consultation, evaluation, and technical assistance as the materials are

prepared for media dissemination. Thus, the specialized members of an instructional planning team could reasonably be expected to work with many professors in a given academic year.

(As more institutions initiate programs externalizing higher education in various ways, more instructional professionals will be required to meet their staff needs. This is especially true where television and other electronic media are employed toward this end. It is therefore essential that colleges begin offering instruction designed to train the new specialists for these new career opportunities. Such training might easily go hand in hand with the development of new academic programs themselves.)

In addition to assembling the specialized personnel identified above, institutions should begin to make arrangements with production organizations. This is a relatively easy matter if one or more of the campuses involved has its own media and/or production facilities. If not, the preferable alternative is to deal with a local, noncommerical educational station or stations.

In externalizing education, the televised or visual product is perhaps the most viable element for interchange among institutions. Co-production by consortium members can help minimize the cost to each institution, while utilization of the product can be spread over a wide instructional base. Without careful planning and cooperation, however, effective use of much of technology becomes prohibitively expensive.

The nature of the product. Project Outreach concurs with Frank W. Norwood, Executive Secretary of the Joint Council for Educational Telecommunications, who cautions would-be consortia not to seek as a goal solely the cooperative production of *courses*. It is extremely difficult to achieve unanimity among consortium members concerning scope, content, and form of courses. Consortia are likely to be more successful if they create "a wider range of options and alternatives from which individual students may select the learning route best suited to their needs and learning style." [44] Member institutions should thus produce a variety of materials which instructors and students can use as appropriate to their own goals. Learning modules are ideally suited to this purpose, as instructors may select and organize the smaller units in a variety of ways. Representatives from each institution, participating jointly in the decision-making process, would assure the end products' suitability for all.

The criteria for curriculum design which follow, therefore, pertain not strictly to discrete courses, but more broadly to the development of technologically based instructional systems. Planning, moreover, must extend beyond the pivotal delivery medium, which in the immediate future is likely to be open-circuit or cable television. Attention must be given to such supportive subsystems as radio broadcasts, printed (correspondence) materials, interaction with instructor and other students via telephone and/or on-campus seminars, resource centers, and counseling services.

Selection of curriculum. In designing any media-based instructional system which requires independent study on the part of students, great care must be taken to identify the needs of the target population to be served. Enrollment potential (or more crassly, audience appeal) should also be considered. Scope and sequence of subject matter should be carefully defined to make sure the instruction will be appropriate for mediated delivery systems and self-study. Prior to full scale production, moreover, a pilot should be prepared for evaluation.

Also, it must be determined for what academic levels the materials will be designed. For greater potential use, initial planning should probably be for lower-division offerings so that any member institution can make use of the product. As the institutions gain expertise in cooperative production, and as the consortium no longer depends for its economic well being on the use by all of all materials, members will be able to augment materials for upper- or lower-division uses--or may choose not to use them--without placing the viability of the entire system in jeopardy. If preparation is undertaken cooperatively, then specialized adaptations of the product can be made at each learning level.

In keeping with the principle of planning with an eye beyond single course use, areas of subject matter should not be viewed in terms only of a single academic discipline. Rather, content should be considered which might cross disciplinary boundaries, as in "core" courses, which could serve as a foundation for subsequent learning in several related areas. Institutions should also think in terms of sequentially presented learning units, which might be combined in various ways to comprise a course, or to provide the initial step toward more specialized study.

In all phases of curriculum planning, special attention should be given to avoid dating or regionalizing the information presented, and provision should be made for re-use, periodic updating, and revision. Indeed, the concept of modularization is helpful in this regard because it facilitates the arrangement and rearrangement of individual segments, and the systematic updating of an entire series.

Curriculum design. The consortium approach to higher education depends on institutional acceptance of jointly produced materials. Procedures must be devised whereby member institutions may have input and recourse concerning curriculum design (including the extent and manner in which television segments will be utilized) and production. Faculty who are to share in the ultimate use of a product must be given adequate involvement in its development.

Toward this end, the Academic Administration Committee recommended that, when an educational need is identified, a Course Content Committee responsible for course design and operation be appointed by the Task Force, with members representing each institution which will offer the course. Selection of subject areas will be made according to input from both community agencies and academic entities. This committee's proposed functions are more fully described beginning on p. 12 of Chapter VIII. The specific curricular divisions which must be made during Phase II will thus take place in the context of Course Content Committee activity. Even if the video materials will be used differently by each institution, input from the respective consortium members should still be assured through this vehicle.

Instructional materials. When work begins in a given subject area, careful study and consideration should be given to the availability (either institutional or commercial) of existing materials on film or tape, or in printed form, that can be incorporated within the new system at reduced cost. The materials to be produced, including video tapes, printed products, and programmed materials, should be designed with applicability to other programs or courses being offered.

Before production of courses is begun, the media components of the overall instructional system should be defined and designed. This will be determined to a

large extent by the technologies available within the respective consortium institutions, as outlined in Chapter VI, Delivery Systems.

The exact mix and relative weight of each media component will necessarily vary according to the requirements of each instructional task. Nevertheless, these components should be arranged (and/or later adapted) so as to satisfy verifiable learning objectives. Ideally, 18 to 36 months should be provided for the preparation of visual products and supportive materials to allow for ample research and flexible production schedules.

To the extent that student-teacher contact is possible in an "outreach" situation, the teacher must assist, reward, and encourage student participation in higher education. Such interaction, limited though it may be, should be built into the system design. James Trent stresses the teacher's importance in terms of the following objectives:

1. The consistent availability of supportive, integrated group experience as part of system design.
2. Developing sensitivity to the needs and natures of a diversity of students, without prejudging them.
3. Applying teaching techniques designed to elicit the greatest potential and satisfaction from the diversity of students.
4. Assisting students in decision-making and other forms of personal development in an academic context--either through personal interaction or referral to appropriate counseling or guidance personnel. [45]

These objectives identify important affective elements of teaching and learning which should be acknowledged in curriculum planning and system design.

Looking into the future, we predict that by 1985 colleges and universities will no longer be judged solely in terms of their ability to conduct research and disseminate information on campus. Much of the task of instruction will be assumed by open-circuit and cable television, individual learning systems, computers, and related technologies. But institutions of higher learning remain responsible for the development of curricula appropriate to the new instructional media.

The new technologies themselves, as well as the media presently available to bring higher education to students away from campus, are discussed in full in the following chapter. Our concern in curriculum is with designing course content and instructional systems which utilize today's media, especially television, to their greatest advantage and which will serve as models for development of future courses and/or learning sequences. Moreover, by keeping in step with the newest developments in communications technology, we aim to use them as they become available for instruction to further the "outreach" of higher education.

Chapter VI

Delivery Systems

Fundamental to the development of a system for externalizing the educational process is an understanding of the means by which change and innovation come about, including a grasp of the media which are available for instructional use as a result of expanding educational technology. Henri Dieuzeide has written,

> The traditional education system has in general underestimated the dynamic character of the communication networks during the past years...Television offers the educational system an unprecedented structural form, which allows for permanent presence of, and unlimited access to, education for all segments of the population. [46]

Implications of Technology: The Electronics Revolution

In the 1960's, when a shortage of college professors was anticipated, instructional technology was too frequently viewed as a means of making learning more independent of instructors and of spreading faculty time over more students. It was soon discovered that economy is not always achieved through technology. But it has proved advantageous for other reasons. Students can play a more active role in their own learning, and those who don't learn well in conventional classes are offered instructional alternatives. They may learn at different rates of speed without affecting the pace of an entire class.

Logistical advantages of instructional television are apparent as well. It offers greater scheduling flexibility, permitting repetition when necessary. What is more, it allows instruction to take place at a variety of locations--in carrels, places of employment, homes, even hospitals and prisons. Faculty members and technologists have begun combining their skills in a "systems approach" to instruction--organizing environments conducive to learning.

The Carnegie Commission on Higher Education recently released a report entitled, *The Fourth Revolution: Instructional Technology in Higher Education.* The "fourth revolution," that of electronics, has wide implications for higher education; among them:

1. Off-campus instruction of adults may become both the most rapidly expanding and most rapidly changing segment of post-secondary education;
2. Fewer students may study on campus, as more choose to pursue studies off campus and receive credit by examination;
3. Students in small colleges may have access to a greater variety of courses and library resources;
4. An expanded concept of the "library" may denote a center for storage

and retrieval of knowledge in many forms;

5. Many more and better tests will be required to evaluate progress of students who learn through new instructional technology; and
6. Good systems of informing and advising students will be essential as additional options for off-campus learning become available. [47]

On the whole, the Commission writes,

> ...it is obvious that the use of technology in American higher education is still a largely ad hoc enterprise, advancing unsystematically in response to the enthusiasms and achievements of certain devoted practitioners, and the occasional emergence of promising new devices. [48]

The report notes that technology and know-how are available for application, but that

> defects in communicating results of experiments to institutions, and inadequate incentives and procedures for effective development, distribution, and utilization of new instructional programs, keep them from general use. [49]

The situation seems to be changing gradually. Technology has brought a variety of media, including television, to colleges closely related either by the same state system or by geographical proximity. Recent years have seen ambitious experimentation in cable and related communications in many parts of the country; this chapter deals with some of the more important media and their value to higher education.

In Project Outreach the initial media focus has been on open-circuit television. But any medium is seldom considered alone. Rather, "instructional television is understood to refer to educational efforts using television, which have as their purposes the production, origination, and distribution of instructional content," in which television is used as the principal or as an auxiliary medium of communication. [50] The definition includes all broadcast activities which handle information specifically organized and produced for learning.

Educators are advised by the Carnegie Commission on Higher Education to capitalize on investments already made in instructional technology (which totaled over $25 billion in federal funds between 1965 and 1969). Broadcast and cable television, video tape and cassettes, computer-assisted instruction, and independent audio-visual learning kits were viewed by the Commission as the tools with greatest promise for higher education.

The Commission favors a "combination effort" of producing instructional materials for both local and national use and recommends that faculty work with educational technicians and media specialists. It also recommends the organization by 1992 of seven regional cooperative learning technology centers in the United States, whose member institutions would share costs and facilities for the development and utilization of instructional technology. Greatest efforts would be toward central identification, production, and distribution of already developed teaching and learning materials for college instruction. [51]

Delivery systems are the tools used for providing instruction to students, including the electronic media. Dr. A. Daniel Peck, Director of the Instructional Technology Center at California State University, San Francisco, believes that any delivery system must allow for two-way communication, have variety and flexibility. In relation to the "1,000-Mile Campus" in California, Peck identifies several principles which must be kept in mind in applying technology to higher education. First, students learn best through a variety of inputs; so no single medium should bear the responsibility of instruction. Second, there is a direct and positive relationship between learning and active response to materials presented. Third, feedback and interaction are necessary to keep both students and faculty alert and effective. He notes the following as possible delivery methods: broadcast television, cable, telephone, filmstrips, audio cassette recordings, and programmed instruction. [52]

Frank Norwood, Executive Secretary for the Joint Council on Educational Telecommunications, recently wrote an essay on "Educational Technology and Nontraditional Study," which included his remarks on several additional types of delivery currently in use. One is ITFS (Instructional Television Fixed Service), a nonbroadcast means of communication which combines low power and low cost to transmit television programs to nearby specially equipped receiving locations. An increasing instructional role is also likely for video cassettes, as they approach audio cassettes in availability. Finally, satellite communications remove the constraint of geographical distance to reach specialized audiences scattered over wide areas. [53]

Norwood concludes,

> Some of the richest ore to be mined is likely to be those points at which new technologies in education and communication can be combined to provide resources of greater power than the sum of their parts. [54]

A list of methodologies, however, does not constitute a system. Any major development in instructional technology should explore media uses within the full context of educational experience. It should design a variety of learning situations. Delivery systems should be developed on the basis of appropriateness for a particular task and most likely would incorporate several different instructional approaches within a given course.

Delivery Systems Today

For higher education as well as other social endeavors, it is necessary to briefly review what media are available today. It is primarily an awareness of the built-in limitations of some present systems which motivates educators and technologists to speculate and innovate with an eye to the future.

Six principal means of delivery, both available and in current use, include: (1) open-circuit television (and sometimes cable), (2) correspondence and study guides (print), (3) radio, (4) telephone, (5) computers, and (6) video cassettes. All enable the student to receive instruction at his home, place of business, or other location. All most likely will contribute to the initial media mix designed for Project Outreach.

Open-Circuit Television

Open-circuit television, as mentioned by Dr. Peck above, is suitable for reaching large numbers of students in multilocations, with both conventional instruction and specially designed visual presentations. But open-circuit dissemination is severely limited by scarcity of both available channels and time for program scheduling. Delivery of instruction into the home is a significant strength of television, but the personal schedules of a student audience are likely to vary so widely that several showings of a lesson might be necessary to reach all of them.

Cable Television

Here is where cable can greatly enhance the medium's capabilities, as it can eventually provide multiple channels for educational use rather than only one, thus allowing for showing of many more courses, and over the entire day. Television in its many forms is uniquely capable of conveying messages visual in nature. However, neither broadcast nor cable television can bear the burden of instruction alone.

Cable television systems have perhaps greater promise for extending higher education than any other product of technology. Open-circuit television is limited to 12 VHF channels; UHF signals increase that number but are poorly received by large segments of population. With so few channels available, most material broadcast today is limited to a mass audience appeal. Thus, when broadcast television is used as a vehicle for instruction, institutions of higher education en counter scheduling difficulties and severe problems of overloading those channels available to them.

Given these characteristics, development of an "open university" approach through television would be impossible except for cable. It offers the advantage of many channels, lower costs, and increased access. Cable systems boast up to a 40-channel capacity, inviting local and specialized services. No doubt higher education will quality for one or more exclusive channels in many areas.

Cable today is the fastest growing communications industry. It will soon be possible to interconnect all major population areas in California by microwave to the head-end of each cable system. Thus, it is technically feasible to establish a state-wide exclusive higher education network. Cable subscription is already substantial in San Diego; here, as elsewhere, it is likely to increase greatly when systems can provide information and content not available from any other source.

Video Cassettes

One cannot discuss delivery systems for externalizing the instructional process without ultimately considering video cassettes. Certainly the most complete means of providing instruction for the off-campus student located remote from the campus is by some recording device that will enable him to peruse course content at his own time and at his own speed. Some type of video recording which can be replayed on home units feeding the instructional material into the television receiver must be devised to meet the requirements of ease of handling, cheap reproduction, and simplicity of playback operation.

There are several systems of video cassette recording and operation which approximate these conditions; but, as yet, no one system is complete enough to warrant adoption as a main system for delivering instruction. The RCA Selecta-vision, the Ampex Instavideo, the Sony U-matic systems have merit and potential for external education. The MCA Disca-vision and the Phillips Teldec systems probably exhibit the greatest potential for mass reproduction and ease of handling.

Project Outreach confidently looks forward to the time when course instruction may be recorded on plastic discs that can be easily mailed and produced cheaply enough that the student may keep them for his own files or throw away as he desires. The record player which feeds the disc into the TV receiver must be within the budget of the average student and be relatively foolproof in operation. When this occurs, video cassettes will become the major delivery system of external instruction.

Correspondence

Correspondence has also had a long-standing place in externalized education. Over the years institutions of higher learning have offered correspondence programs for students with credit or degree objectives, for professionals in many fields, for technicians and teachers, for people with cultural interests. The strengths of correspondence study fall into two categories. First, it reaches students who might not otherwise qualify for admission to college, as well as those who would. It reaches those who cannot attend a campus as well, in fact, extending the educational institution as far as the mail can take the materials. Correspondence also offers its students flexibility in time, allowing them, within broad guidelines, to pursue their studies at their own convenience.

In addition to physical advantages, there are also learning advantages inherent in correspondence study. It encourages self-motivated learning since work is undertaken only at the student's initiative. Lessons themselves are likely to be more thoroughly and carefully prepared, since they are delivered in printed rather than informal oral form. Further, some would even argue that correspondence brings about greater accuracy in knowledge, since students are regularly required to respond the instruction in writing.

Correspondence also has its drawbacks, as Dr. Gayle B. Childs recently observed in a book of readings on the subject. [55] First, because of a time lag between a student's preparing and submitting a lesson and his receiving the instructor's evaluation, there is a break in the learning cycle. Even a simple question must await a written answer. Second, a correspondence instructor administers a relatively rigid course sequence and has little or no opportunity through direct interaction to recognize or adjust to individual differences among students. By the same token, the student himself suffers from lack of interaction with others, interaction which could help both to answer questions and strengthen motivation to continue. Finally, continuous updating and revision is as necessary for correspondence as for on-campus courses; yet because of the inherent rigidity of printed instruction, this difficult task is often neglected.

Charles A. Wedemeyer has summarized the hazards of the correspondence method as follows:

1. Incomplete or delayed communication
2. Inadequate experience involving all the senses
3. Imperfect conceptualization
4. Weak motivational devices
5. Rigidity of formal process
6. Overdependence upon the written word
7. Lack of instructor experience with the correspondence method
8. Absence of good interest-building devices
9. Lack of active "doing" activities [56]

But Wedemeyer hastens to add that the greatest effectiveness of correspondence results when it is used "in adaptation or combination with other learning methods." Printed study guides have become an educational form of their own, largely due to their development and use by the Open University; much is being achieved toward making study guide production into a science. Such media as printed texts, pictures, graphs, films, recordings, television, radio, and telephone can together contribute to enrichment and improvement of learning. "Correspondence study," he concludes, "may give way to cross-media learning." [57]

Radio

Radio may be regarded essentially as audio reinforcement of visual delivery. Students can listen to radio broadcasts to review notes or hear lectures missed on television, or to receive supplementary materials. Radio can, in fact, be used for instruction whenever a picture is not necessary--which should remind educators that the "talking face" is *not* the best use of a visual medium.

Telephone

Discussion of present-day delivery systems must also include mention of the telephone, which is effectively used to receive feedback from instructional telecasts, at relatively low cost. Its "tele-lecture" capability makes possible teacher contact with a distant group in two-way conversation. Such a program is in use in San Diego schools to reach homebound handicapped students.

In the last few years, Pacific Telephone has developed nearly 100 different interconnecting arrangements and interface devices, designed to link various speaking, answering, and recording units made by the phone company and other manufacturers. Colleges and universities involved in television and other off-campus teaching activities have begun to use telephone recording equipment to receive, and later answer, students' questions and comments. Devices are now available which both present the caller with a recorded message and allow him to leave a response.

Recording devices are limited in capacity by the size of tape installed. Announcement tapes are available in lengths of from 30 seconds to three minutes; recording tapes can take a maximum of two hours incoming messages. Most answering sets, however, have no "hold" capacity. Rather, just as in conventional telephone service, a "busy" signal is heard if another caller is already on the line. The handling of multiple calls simultaneously would require use of multiple answering devices.

Computers

Use of computers at the university level focuses on administrative and accounting tasks and on academic functions. In an academic program, they can be used as either a subject or tool of research, or as a subject or tool of instruction. Our interest in computers as delivery systems is in the latter application. In its broadest sense, computer-assisted instruction (CAI) embraces the totality of computer use for a given course of study.

The National Academy of Engineering states, "Irrespective of use, a time-shared console seems to be characteristic of all recent CAI systems." [58] These vary widely in sophistication and can include use of cathode-ray tube displays and audio facilities, all controlled by computer. Most computer applications, however, are centered within a single institution or group of institutions within a single system.

The present status of CAI can be summarized by naming three major uses: (a) drill and practice, (b) tutorial systems, and (c) dialogue systems (trial and error). Research, however, has been identified as "probably the most important contribution which CAI can make in the near future." [59]

At present, CAI is not in itself a delivery system, but more a means of storage of information. As will be seen in subsequent discussion, however, the computer may well become part of a wider technology in the terminals of two-way communications systems.

Mix of the Media

It is possible to extrapolate, from the media discussed above, a model mix which would provide an efficient linkage for Project Outreach utilization. As just discussed, communications systems of the complexity contemplated by Project Outreach will be equipped to provide immediate transfer of information from institution to community.

The base medium at this point in time is open-circuit television. Regardless of broadcast television's channel limitations, it is compatible with other communications media and is available in nearly all homes within a community. The telephone is equally available to individuals, with modern telephonic systems capable of stacking messages in greater quantity than is even necessary except in unique cases. Radio systems are available for audio reinforcement throughout the day; and print materials can be readily made available via mail service, although with the time lag disadvantage.

Cable systems and multiple distribution services are becoming more available both locally and regionally through interconnection of cable head-ends. Distances become even less meaningful when we realize that satellite transmissions may feed local cable systems for community distribution. ITFS systems may be used for point-to-point delivery and can be used effectively for communication between institution and agency where cable communication is impractical.

It is imperative that Outreach participants be in step with the latest technical developments in electronic delivery systems. However, the services that can be uniquely provided through the Outreach concept need not wait for further technology. A mix of the media elements described below, adapted in configuration to

the specific instructional task at hand, can meaningfully sort out and distribute the knowledge and expertise gathered on the various campuses of higher education.

The Project Outreach delivery system will thus include the following:

1. A television production facility and staff.
2. Computer facilities and personnel.
3. Radio access.
4. Telephone feedback provision through recording capability.
5. Services of postal system to transmit reference materials, study guides, and other printed matter.
6. Provision for face-to-face interpersonal communication.

Summary

Project Outreach joins many educational endeavors today which are looking to electronic delivery systems as new tools in higher education.

Indeed, the Sloan Commission on Cable Communications observes,

> It appears at first sight absurd that formal education, itself primarily a communications process, should be so indifferent to the provision of powerful new tools of communication. But it is conceivable that it is precisely the power of the new tools, and in particular the power of television, that makes them appear incompatible with the existing educational system...Its full impact in the educational system might be enormous. [60]

Certainly, the use of technology in higher education often is regarded with suspicion and hostility within the academic establishment. But in view of the recognized reality that extensions of conventional systems are necessary if we are to meet the needs of many students, Frank Norwood declares that it is "shortsighted and unwise to separate the debate about instructional technology from the growing debate about instruction." [61] Norwood further urges attention to the "roles which technology might play in providing students with new opportunities for more individualized, independent study."

The use of cable in its many forms is undoubtedly the most significant contribution that communications technology can make to higher education; but the Sloan Report cautions that cable must be integrated into the educational process as a whole. "The problem is not sensibly to be considered as a question of what cable television can add to the formal education process, but as the broader question of how the entire process changes when a powerful new tool of communications is added." [62]

The delivery system elements proposed herein for Project Outreach carry with them the possibility of significant change in conventional ideas of college instruction. As Norwood has noted, such technology can contribute to: (1) fuller educational opportunities for those now outside the traditional patterns of higher education, (2) new areas of course content, and (3) a culturally richer environment due to the educational resources released into the community. [63]

To conclude, Norwood perceives "timely opportunities" for experimentation in using mass media to reach new educational audiences beyond the classroom. "A 'new tradition' of nontraditional education has not yet emerged," he explains, creating a context of flexibility and a spirit of adventure for the growth *together* of nontraditional study and new communications options. The time is ripe for rethinking educational goals, priorities, and methods. "Indeed, the essential requirement of nontraditional study is to shake loose from established ideas about education as well as about educational technology. [64]

Joint planning and cooperative action initiated by institutions to combine resources is essential. Without careful planning and cooperation, effective use of television and other media is prohibitively expensive. The delivery system concept sets forth a process by which education can be externalized; as indicated elsewhere, the exact nature of that system will have to be determined as Project Outreach moves into preparation and operational phases.

Chapter VII

Evaluation

Evaluation of Project Outreach activities can be considered in three aspects. First, an evaluation of Project Outreach Task Force activities during the first year of its operation--that is, an evaluation of Phase I of Project Outreach. Second, the evaluation of the model developed by the Project Outreach Task Force during its Phase II activities. Third, an evaluation of the instructional systems implemented by the Project Outreach Task Force as a result of its Phase I and Phase II activities.

This chapter will not describe the results of these three types of evaluation, as accomplished, but rather will outline, for the first two, some of the goals and objectives lending themselves to formalized evaluation procedures and for the last, a conceptual model of instructional system evaluation that can be employed for the quality assessment of any instructional procedure, including and especially external education programs.

Task Force Objectives

Goal

The overall goal of Project Outreach as articulated in Chapter I is:

> ...to design, coordinate and implement means of extending educational opportunities to a large segment of a community not now having access to continuing education, community service programs, or course work for college credit.

Objectives - Phase I

Objectives met by Phase I activities of Project Outreach as a means to working toward achievement of its overall goal include the following:

1. The planning of a system whereby the educational process may be externalized.
2. The establishment and operation of formal study committees.
3. The study of nontraditional approaches to higher education.
4. The preparation of two television pilot programs to test the feasibility of joint interinstitutional cooperation in television course production.
5. The exploration of cooperative arrangements with community agencies representing special community groups.

The degree to which the Project Outreach Task Force achieved these objectives during the first phase of Project Outreach has been articulated in a series of periodic "Goldenrod" reports submitted by the Project Outreach Executive Committee to the California Coordinating Council on Higher Education. In addition, the Outreach Task Force produced the two pilot programs and this summary report and planning guide which complete the Outreach Phase I commitments. In addition, working relationships were initiated with all higher education institutions of both counties.

Model of Institutional Cooperation - Phase II

Goal

The purpose of Phase II of Project Outreach is to continue work in reaching the overall goal of designing and implementing means of extending educational opportunities to the community. Phase II of Project Outreach will be evaluated in terms of those process objectives and product objectives which serve this overall goal.

Process Objectives - Phase II

The following process objectives have been articulated for the Project Outreach Task Force during its Phase II operation.

1. Expand administrative coordination and cooperative groups to work through the problems identified in Phase I of the project.
2. Integrate arrangements prepared during Phase I with existing delivery systems of San Diego and Orange Counties. Areas which need attention in this regard were identified during the Phase I Project Outreach activities.
3. Undertake the preparation of courses to be offered over television.
4. The development of a research program to evaluate the effectiveness of student access and interaction with television courses prepared by the Task Force.
5. Continue planning and development involving community agencies, groups, and individuals. County agencies, related community groups, and selected individuals will be brought into the project during its second phase.
6. Establish a community agency task force to participate in the identification of educational needs of target populations.

Product Objectives

The process objectives listed above suggest three significant product objectives.

1. The completion of a course of instruction employing television as the major medium of distribution.
2. Matriculation of television students at each participating institution.
3. The establishment of a community agency task force.

Specific quantitative criteria to evaluate the degree to which these product objectives have been reached by Phase II Project Outreach activities will be developed early in the operation of that phase.

Evaluation of External Instructional Systems

The model of external Instructional Systems developed by Project Outreach is conceived within the framework of television as the major means of distribution. This need not be the case with all external education offerings jointly developed by the three segments of higher education participating in Project Outreach. This discussion, therefore, considers the overall goal of external education programs in terms of the target population to be served and methods by which the instructional delivery systems used to reach those target populations may be evaluated.

Evaluation of external instructional systems can be accomplished in terms of three aspects: target population, feedback, and follow-up.

Target Population

Evaluating programs in terms of whether or not they reach the target population as identified in Chapter III makes use of data gathering procedures which collect information about enrolling students at the time they enroll in specific courses. Data elements gathered from each enrollee consist of the following:

1. Personal data
   a. Birth date
   b. Income
   c. Ethnic background
   d. Marital status
   e. Number of dependents living in household and their ages
2. Student status
3. Reason for enrolling in telecourse
4. Work schedule
5. Position in household
6. Occupation
7. Physical handicaps
8. Transportation availability
9. Desire for credit

Data for each student is aggregated. A profile of students enrolled in external courses can be prepared in terms of the various data elements. This profile then can be compared with the profile of regular students, full-time, part-time, extension or whatever, who typically enroll in the institution. To the extent that the external student profile differs from the regular student profile, conclusions can be drawn concerning the degree to which the external programs are reaching the target audience. Conclusions may also be drawn as to which portion of the target population the programs are reaching and a summary of reasons why that portion of the target population enrolls in specific courses.

A second element of the target population component is a research program which would make a definitive study of the counseling needs of the adult student. [illegible] begin with the first students in the first courses and would become part [illegible] g evaluation activities.

Feedback

Feedback information is used to evaluate two aspects of external programs and courses--first, the degree to which specific objectives of each segment within a course are being met by the students and, second, the degree to which the learning materials included with the instructional segment are effective in helping the student meet the objectives. When the student completes the instructional segment which may consist of televised programs, textbook readings, radio broadcasts, seminars on campus or in learning centers, and programmed instruction, he sends a completed written assignment for the segment to the institution which then processes it.

The results of processing are reflected in two reports. One, delivered to the student, evaluates his progress in terms of the instructional segment. The second report evaluates the effectiveness of various instructional elements within the segment in terms of its instructional objectives. This latter evaluation report is used for modifying and improving the instructional segment.

Figure I shows the logic flow of the feedback evaluation process. The completed written assignment is delivered to the institution at which place it is processed and then filed for later reference if necessary. Processing provides evaluation of the student's progress and of instructional processes making up the segment itself. Information on both types of evaluation are stored in a roster file. The roster file maintains information concerning all students enrolled in a particular course including evaluation information. Information in the roster file is used to provide an evaluation report on the particular segment which is then delivered to the student. Evaluative information from the roster files may also be used to provide periodic summary reports.

Follow-up

Follow-up evaluation of televised courses will gather data from students who complete the courses as well as from those who do not. The purpose of follow-up evaluation is to assess the effect that enrolling and participating in a televised course has upon students.

Follow-up information may be used eventually to provide an assessment of the general consequences as reported by students enrolled in televised courses. For example, we are interested in whether initial enrollment in a televised course serves as a precursor to subsequent enrollment in regular college work. Students are also asked to indicate ways in which their experience in taking a televised course could be made more enjoyable or useful.

According to James Trent, "The provision of universal higher education, and the understanding of individual decisions regarding college specifically, requires a comprehensive program of research and evaluation." [65] The following interrelated objectives should also be those of the Evaluation and Research component of Project Outreach:

1. To learn more about *who* can profit in *what ways* from *how much* of *what kind* of higher education;

2. To improve understanding of the dynamics of educational and vocational decision-making, and the refinement of models designed to apply this knowledge;
3. To learn how to restructure the socio-economic environment beneficially when it is found debilitating to optimum educational decisions;
4. To evaluate programs designed to assist students in their educational achievements and decisions, to document the common elements of these programs found to be the most successful, and to learn how to apply them economically on a wide scale;
5. To learn how to develop integrated educational, counseling, and social reference groups to compensate for negative inputs from the environment; and
6. To learn what characteristics and techniques of teachers, counselors, and schools, in general, best help individuals realize their academic potential, sense of worth, and personal satisfaction.

Chapter VIII

Administration

Three segments of higher education are involved in Project Outreach--the University of California system, the California State University and Colleges system, and the Community College system. A cooperative arrangement encompassing two counties carries potential for bringing instruction to a vast student audience--students presently both inside and outside the academic mainstream. The consortium approach also invites the sharing of institutional facilities and faculties to produce and offer new and effective kinds of educational resources.

The Project Outreach Task Force and its committees dealing with the administrative matters, however, have identified significant and complex administrative problems inherent in *jointly* externalizing the educational process. The California Coordinating Council for Higher Education has been effective in both legally and functionally differentiating between the three segments, making it an extremely difficult task to bring them into cooperation in consortia. Nevertheless, we believe that our goal to offer education which accommodates students' life styles and work schedules merits continued efforts toward making a cooperative system work.

General Administration

The General Administration Committee was assigned to study the following problem areas:

A. **Sharing.** How will the consortium systematically learn of other projects in the United States more or less similar to Project Outreach, and their technologies, results, etc.?

B. **Public Information.** What is the best method of initially locating potential viewers and students?

C. **Copyrights.** Clear definition and understanding regarding these rights is essential from the outset. How does the consortium define rights of faculty, institutions, and perhaps broadcasters in relation to the consortium?

D. **Fees.** Is the consortium to utilize one common course fee structure, or is each institution to charge a different fee?

E. **Cooperating Agencies.** The planning and evaluative models recommended to and accepted by the Coordinating Council necessitates the designation of any community agencies having an interest in the problem or an area the project is attacking. What are these agencies?

F. **Staffing.** How do the personnel resources of the consortium and cooperating institution become assigned to and assist in production, and fiscal [illegible] academic administration of the project?

PROJECT OUTREACH
PURPOSED FUND FLOW MODEL

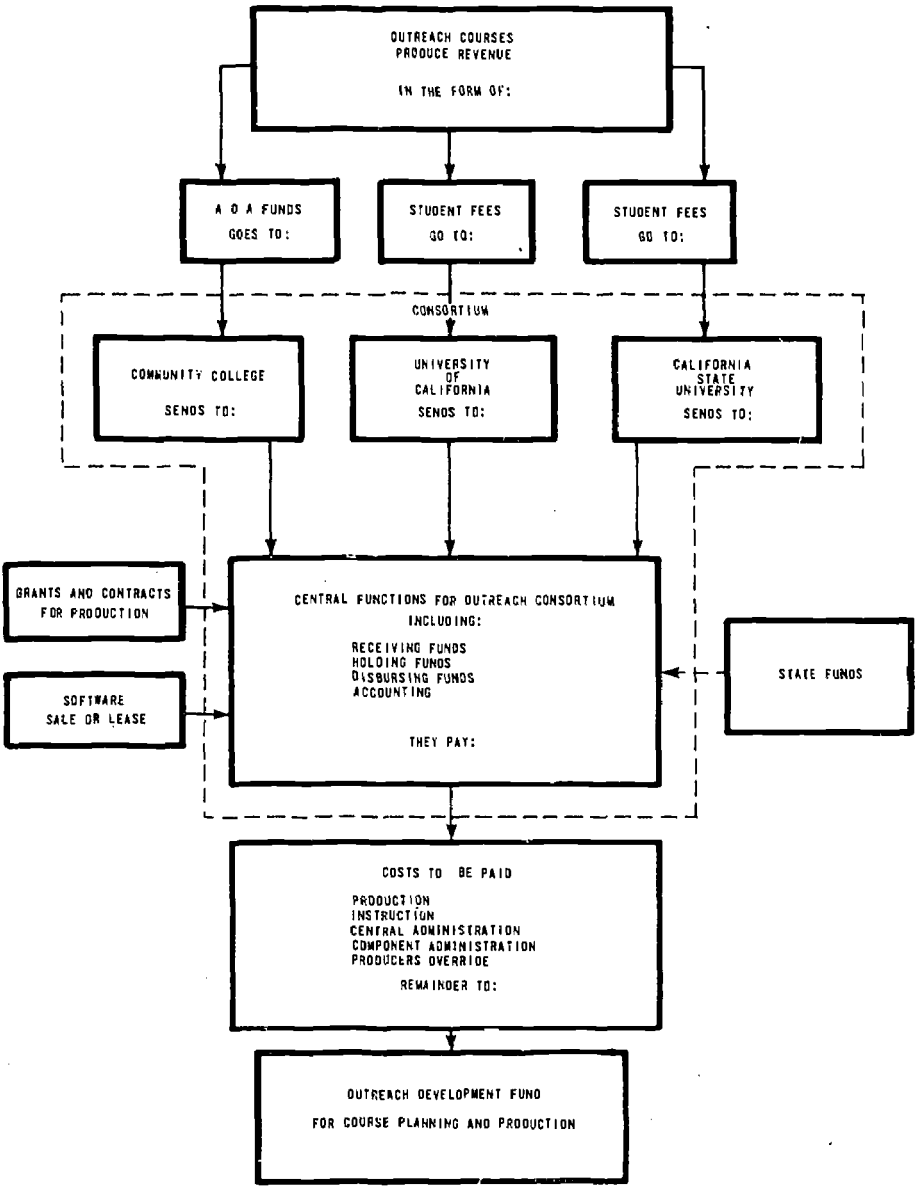


Figure 4

G. **Financial Management.** What sorts of arrangements are best for handling financial transactions and accounting among consortium members and cooperating institutions or agencies?

H. **Administrative Vehicle.** What should be the nature of the consortium? What powers should it have vis-a-vis the participating institutions? Should a model be constructed for future institutional cooperation?

The bulk of the General Administration Committee's work has dealt with matters of *copyright, fees,* and *administrative vehicle* as areas requiring the most urgent attention. By defining the nature and powers of a consortium administrative vehicle, means of dealing with other problems are suggested as well.

In order to make preliminary recommendations in each area and find grounds for cooperation as a consortium, representatives of the three entities submitted policy statements of their respective institutions. Advice was also obtained from legal counsel for Orange County and the San Diego State University Foundation.

Tentative findings are as follows:

Copyright. Attorneys for the member institutions of Project Outreach generally take the position that material written or produced by their employees on paid time are the property of that entity. Explicit delegation of rights to materials to the consortium are needed, and an attorney for the San Diego State University Foundation believes such delegation is legal. Thus, although the joint Outreach entity cannot legally apply for copyright in its own name, it can receive *delegated* rights.

A related issue is that of ownership of materials, how ownership rights are assigned and handled. Part of our problem in regard to ownership is the mix of funds--much federal, with some from the individual schools doing the producing. But since the consortium itself cannot apply for copyright, both ownership and copyright matters must be handled by producing agencies. Thus, two approaches to assignment of copyright are possible:

1. It is legally and administratively possible for the various producing entities, by a formal vote of their governing boards, to *delegate* rights to the Outreach consortium; or
2. The respective producing entities may *retain* copyright, but with prior agreement made as to basis of sharing materials within the grant consortium and within local institutional groups.

Tuition Fees. Tuition is the single biggest issue which must be resolved to make a consortium workable. Although a uniform fee among all institutions for a particular course is highly desirable, the individual entities' respective fee structures make such an arrangement difficult. Their respective governing boards would have to take special action to bring their fees into alignment.

At the heart of the problem is the wide discrepancy among the institutions concerning the fees they now charge for Extension and, in the case of community colleges, regular courses. University of California and California State University Extensions must charge, respectively, $15 per quarter unit and $24 per semester unit, which covers all course costs plus extension administrative costs. Community colleges, on the other hand, cannot charge any kind of direct tuition fees for courses or they lose state support based on Average Daily Attendance.

Ideally, all students taking the same Outreach course should pay the same fee. If the three entities are going to offer courses to the public, students should be able to receive credit from the institution of their choice, without being influenced by a difference among them in course fees. Thus, the committee recommends that the consortium institutions charge a uniform fee for the first courses offered, approved by appropriate governing boards on an experimental basis. Such a policy would bypass more complicated institutional machinery and, if successful, might facilitate more permanent arrangements concerning Outreach course fees.

If institutional differences cannot be resolved, however, the alternative of differential fees will be necessary. In that event, financial considerations may influence to some extent a student's choice of institution in which to register for credit.

Of course, it has been acknowledged by the Curriculum Committee that the instructional learning materials produced by Project Outreach need not, and should not, be confined to discrete courses. If a "core" series of video lessons was adopted for upper- or lower-division use according to the needs of the respective consortium institutions, then any differential fees charged among them could be justified by the level of instruction.

Needed also is a determination as to the proportion of direct and indirect costs which are to be covered by fees. Salaries, operating expenses, and capital costs must be considered, along with prospects for eventual state funding. Such matters will govern how high any fee must be.

Ongoing funding arrangements for consortium operation should thus include:

1. Designing a fee structure acceptable to all members (or agreeing to work within existing institutional limits); and
2. Determining criteria to apportion each institution's share of support of ongoing programs.

Administrative Vehicle. It is particularly important to define precisely the administrative and decision-making powers of the grant consortium. Two views of a central Outreach structure are possible: (1) It could be simply an agent with the catalytic role of getting the entities together for policy decision-making, arranging for committees to meet, collecting routine data, and writing reports therefrom while carefully avoiding any tendency to accumulate decision-making power on its own (i.e., operating with the existing Executive Committee and personnel); or (2) it could be a strong central body with administrative control over a number of crucial matters such as accounting, marketing software, exercising production cost controls, etc., but with policy direction and control remaining squarely in the hands of the entities or the governing board designated by the entities.

Illustrative of both the necessity for clear lines of responsibility and authority is the problem of cash flow among and between entities. The committee began by designing a possible fund flow model for Project Outreach, with money from student fees, along with state and grant funds, channeled to a central entity which pays costs of operation and development. A revised version of this model, approved by the Task Force, is included in this chapter.

In the short term, responsibilities are best divided up and specific jobs assigned to those entities which can do them best. Administrative functions which

must be handled either in a central office or by specific assignment to one of the entities must include:

Production

1. Identification of target population
2. Deciding what course material should be produced
3. Selection of production staff--Course Content Committee
4. Coordinating production and academic arrangements between institutions
5. Setting production schedule
6. Obtaining faculty clearances/input
7. Exercising fiscal control over production

Delivery

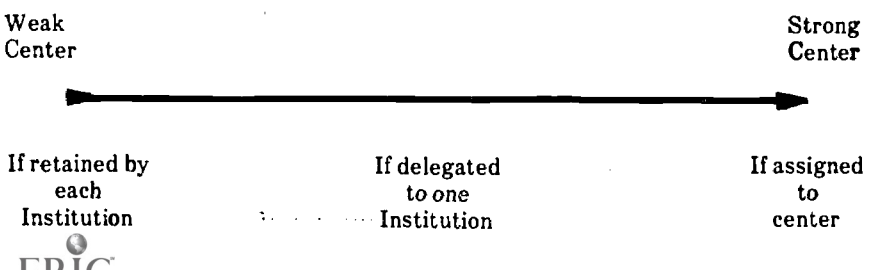
1. What delivery system(s) are to be employed?
2. Which entities will use product?
3. How product will be used by each entity
4. Selection of supplementary media

Administration

1. Accounting of funds
2. Setting of tuition fees to be charged
3. Recording student enrollment
4. Holding copyrights/sharing agreements
5. Marketing of materials among other institutions
6. Negotiating grants and contracts; seeking new funding sources
7. Coordinating public relations and promotion to new audiences
8. Researching and evaluating student reactions

The committee recommends that there be some allocation of funds to a central entity for joint operations, though such an office might initially be staffed by only one clerical person.

The power of the consortium board and/or central office may be weak or strong, depending on the number and type of questions decided by them in relation to the number retained for decision by the entities or assigned to them for decision. A chart illustrating where the power would reside and its result in a weak or powerful center might look like this.



Decision-making regarding Project Outreach might proceed as follows:

First Question: Which ones of the classes of decisions listed should be given over to the consortium board of directors for handling and which should be kept by the institution without reference to the consortium board?

Second Question: Of those classes of decisions referred to the consortium board for consideration, which locus of decision-making will they identify for each question or class of questions:

1. Permitting decision-making to remain in each institution;
2. Delegating to one institution the power to decide that type of question for all;
3. Assigning to a central office of the consortium the power to decide that type of question for all.

Third Question: Once the locus of decision-making is determined for all questions, how much *de facto* authority will be granted to staff? That is, will staff carry out decisions or help shape decisions? Will the veto power be used rarely or often by the entities?

When a board of directors for the consortium is formed, it might be constituded with voting members representing central and project level administration from each entity. Staff from the central office and individual entities might also serve in an ex-officio, nonvoting capacity.

The committee recognizes that certain institutional structures and regulations exist within the respective entities, which might impede the operation of the proposed consortium functions. Part of the difficulty resides with the broad problems reflected in the entities' offerings of upper-division and lower-division courses, and the nature of community college involvement in the overall Outreach program. Therefore, to assure that the Outreach model is operational at some time in the future, each entity is now looking at the things it can and cannot do within existing institutional structures. Ongoing planning can be most realistic if done with knowledge of actual institutional capabilities.

Academic Administration

Broadly, areas of concern in academic administration are:

1. Admission
2. Registration
3. Degrees and/or Certificates
4. Credit
5. Instruction

An essential administrative task involves designing and implementing a system of academic procedures in terms of the above categories, within which all three levels of higher education can legally and administratively function. Our tentative findings and recommendations in these administrative areas are as follows:

Admission. In light of the purpose of Project Outreach to find means to reach and identify new students in multilocations, initially all enrollment should be open. Able students will proceed with courses and succeed, but those unable to keep pace will not be penalized for withdrawal or failure to complete the work.

Courses first offered by the consortium will most likely be lower-division with no prerequisites. In the future, as upper-division courses are developed and offered, there will more likely be prerequisites which must be met by examination or prior course completion.

Because of the nature of the mode of instruction inherent in Project Outreach, a student may, without registering, "audit" a course before enrolling for credit. Since the bulk of instruction will take the form of correspondence and electronic display, auditors will not incur additional program costs or time. In fact, there is real value in making higher education available to the person who believes he cannot handle it, but who demonstrates to himself that he can.

Registration. The student will not, initially at least, enroll in any "program." Rather, he will enroll in a course at the member institution of his choice. Yet, maintaining enrollment data is an important function of any central Outreach administrative entity.

The rules and regulations by which the program operates will be set by the administrations of member institutions of the consortium and will thus reflect their respective policies toward regular and late registration, withdrawal, credit, refunds, etc. The consortium, therefore, must be sufficiently flexible to accommodate these diverse rules and regulations.

Degrees and/or Certificates. The Project Outreach consortium will *not* be a degree-granting agency in and of itself. Neither is it likely in the short run that students will receive all their higher education credit via Outreach instruction. However, if the system proves of value as a means of reaching a student body other than by campus attendance, certainly in the long run a variety of courses may be developed for electronic dissemination which might fulfill the requirements for a degree or certificate.

Credit

Definition. An "Outreach course" in this discussion is one produced or acquired by a member institution or institutions and is available for joint instructional use. It must be offered for credit by at least two consortium institutions to be considered a consortium course.

As Project Outreach will not grant degrees, neither will the consortium be a credit-producing agency. All credit given for Outreach courses will be granted by the member institution in which the student registers.

Credit from Outreach courses should be acceptable toward degrees at member institutions, with the courses themselves recognized as part of the regular departmental offerings. Although courses at the four-year institutions will initially be offered through Extension services, students must be assured that Outreach courses will carry no suspicious stigma on their transcripts. Credits also should be transferable among consortium institutions in the same manner that transfer credits are presently accepted by colleges and universities.

Prior consultation among the faculties of participating institutions will be essential to insure that each institution will provide course credit if the student elects to enroll at that particular school. It is, therefore, mandatory that this pro-

ject address itself to the ongoing administrative procedures whereby the faculties of member institutions will approve credit for Outreach courses as a regular departmental activity. Such procedures are discussed further below under "Instruction."

Instruction.

Definition. Three views of an "instructor" are possible in the project, and they all might eventually have a place in Project Outreach operation.

a. "Course instructor" in this context refers to that individual selected by the Course Content Committee and agreed upon by all departments concerned as responsible to the consortium for the integrity of the course. He may or may not appear as instructor of televised lessons. (For example, if materials are obtained from another source, the person on the tube would be from the institution of their origin.)
b. "Instructor of record" (or course manager, or tutor) refers to the individual who represents the course at each institution. He may have no actual involvement in teaching but handles his department's management of the course.
c. If the instructor on the screen is not associated with one of the member institutions, a third view is of "*consortium* instructor of record" who is responsible for the use of course materials within the consortium. He would be responsible to each institution for specific instructional aspects of the course.

The course instructor would operate under the administrative authority of the consortium office and may be remunerated from consortium funds derived from member institutions. Instructor(s) of record will, of necessity, relate to the consortium, but their primary responsibility will be to the institution(s) granting the credit. They, too, may be paid from consortium revenues, or by the institution granting the credit.

Course Design and Production. The consortium approach to higher education rests with institutional recognition of courses. Procedures must be devised whereby member institutions may have input and recourse concerning course *design* (including the extent and manner in which television segments will be utilized) and *production.*

In many instances, no doubt, Project Outreach courses will be developed by the academic departments of the member institutions when a particular need arises which an externalized program can best solve and satisfy. When such a need is recognized, a Course Content Committee responsible for the design and operation of the course should be appointed by the consortium, with members representing each institution which will offer the course. Thus, approval will occur at the time the course is developed.

The Course Content Committee would perform the following functions:

a) Select course instructor and assure his recognition for credit purposes at each institution. There is precedence for such acceptance in the relationtionship set up between academic departments and Extension divisions.
b) In conjunction with the course instructor and the instructor(s) of record, determine how student achievement will be evaluated and what grading system, consistent with the policies of member institutions, will be employed.

c) Coordinate media mix consistent with instructional goals and requirements of each course. Use of the various communications media in instructional design will vary according to course requirements and the desires of the instructor.

d) Give attention to *cost feasibility* in planning. For example, if an instructor of record must be appointed by each institution, replication in time and money required by each school may render the entire program unwieldy in the short run. The problem of multiple salaries would need to be weighed against possible cost efficiencies of (1) offering materials more than once, (2) marketing materials outside the consortium, and (3) increasing the ratio of students to instructor.

Externalized instruction should be viewed by academic departments as an integral complement to traditional classroom instruction, and funds for ongoing Outreach courses should be regularly allocated in institutional budgets.

Summary

In all committee deliberations, it has been necessary to acknowledge institutional autonomy within the context of group (consortium) goals and priorities. Each institution is still an independent entity; therefore, a flexible overall administrative structure is necessary. Problems in creating such a structure have been identified, and possible solutions for operation proposed. The time has come to organize procedures and tasks in such a way that problems are resolved and operation conducted to both the institutions' and the students' benefit.

In this planning phase of Project Outreach, the Administration committees attached particular importance to interinstitutional cooperation and communication among all three segments of higher education in both counties. Although the original funding was given to only three entities, the system they develop will not be for their use alone. Full participation in the decision-making process must be assured to those other institutions in San Diego and Orange Counties which will have the opportunity to offer Outreach courses.

For example, a San Diego student who wished to receive community college credit for an Outreach course could not do so by enrolling at Orange Coast or Golden West College. Rather, he would be required by law to register at the community college in his own geographical area. Therefore, the San Diego area group has increased the input and involvement of local community colleges--which, in turn, strengthens their support of Project Outreach and broadens the opportunities for San Diego students to take Outreach courses. By the same token, to insure Orange County students the option of enrolling at either a community college or a four-year institution, four-year institutions in that area must also expand their involvement in group planning.

The results of expanded interinstitutional cooperation cannot help but become manifest in a stronger consortium, with greater "outreach" into the community it proposes to serve.

It is recognized that those administrative arrangements suggested by Project Outreach may or may not be appropriate to other consortia for nontraditional evaluation. At the same time, however, major areas of concern and obstacles to cooperation which must be dealt with by any joint venture have been i[illegible]. For this reason, these deliberations should be of value to future con[illegible]h similar goals and resources.

Chapter IX

Future Directions

The planning stage of Outreach has been completed. The consortium will now proceed to develop additional courses and expand operation of the design plan as explained in the previous chapters. A continuing effort will be made to inform and involve other institutions within the three segments of higher education within the two-county area. Financial support for the development and operation of subsequent efforts will involve Title I of the Higher Education Act, as well as other federal agencies, foundations, and industry. Institutional resources will also comprise a substantial portion of the support.

Phase II of Project Outreach

Beginning in July 1973, Phase II will be primarily production-oriented, following plans and procedures developed in Phase I. Community participation in Project Outreach will be increased through the formation of a community agency task force whose members will include community leaders and problem solvers. Its goal will be to bring community representatives and higher education participants together in a coordinated effort to identify target populations and educational needs and propose new courses to meet them.

At least one, and possibly two, new 30-segment half-hour series will be prepared, including appropriate supportive materials integrated with visual products. These courses will be identified with community agency participation in terms of their potential for solving community problems. It is important to the present phase of the project that new course series serving specific target populations be identified. All institutions--both higher education and community agencies--must participate in the selection. It is community input and involvement, in addition to that of institutional faculty and administration, which will cause the model developed in Phase I to be operationally successful.

Representatives of participating institutions will meet continually to review arrangements and materials. Three project team meetings will be conducted during the year beginning July 1973 to review project progress. Between meetings Task Force committees will continue work in their respective problem areas to insure success of the continuing operation of the system. The director and co-directors will be responsible for coordinating the overall effort and implementation of the plan.

An important administrative task during this phase will be to formalize agreements as to the responsibilities of the respective Outreach consortium members and community agency representatives. As the institutional group is augmented to include other participating entities within the two counties, the principle of joint powers will have to be expanded and more clearly defined. The Task

Force will also determine the scope of consortium board and/or central office powers, based on members' preferences and the respective institutions' administrative capabilities.

Other activities to be accomplished which are related to the course series preparation will be to:

1. Review existing and available instructional materials and assess their appropriateness to the local project.
2. Examine and analyze potential cooperative arrangements with other agencies involved in accessing instructional materials.
3. Arrange for offering courses over television among all public higher education institutions in San Diego and Orange Counties. Task Force committees are now effecting appropriate arrangements identified as required by the planning phase design.
4. Arrange for access systems including cable companies, cassettes, and other forms of instructional delivery. Integration of materials into community library networks is an example.
5. Establish a counseling center in each area served by Project Outreach, equipped with information about consortium institutions and with personnel attuned to the unique counseling needs of new off-campus students.

Phase III of Project Outreach

Phase III, the implementation phase, will involve the offering of Outreach courses and their supportive programs. The counseling component will be put into operation in both counties to meet the information and guidance needs of new students. The model instructional system previously prepared will be implemented. Research will be carried out to evaluate the degree to which instructional objectives are met by students and the effectiveness of learning materials, with feedback to the student, the institution, and the counseling staff to identify and deal with problem areas. In addition to course-related activity, the Task Force will continue to receive community input for new courses and supportive materials. Continuous internal and external evaluation procedures will be conducted throughout the consortium operation.

Task Force activities will continue to be assessed in terms of their meeting their stated goals and objectives. A tracking system will collect achievement and normative data on participants/students.

Conclusion

The technology for employing instructional systems involving multimedia for off-campus instruction is here. The production facilities of the Outreach institutions facilitate the development of television and other media materials to a high degree of sophistication. Unfortunately, many of the present efforts to use TV for instruction are handicapped by the absence of several vital ingredients: adequate initial financial support, quality materials, and institutional coordination. While institutional coordination most often occurs locally, and Project Outreach promises a wealth of opportunities for cooperation, the ingredient of financial

support must increasingly be sought from funding agencies at the national level. Only through the production of high quality, carefully prepared and validated course materials can we be successful in providing viable opportunities for people to learn.

Project Outreach has special importance in the movement toward increased learning opportunity via television and other communication technologies. It brings together all three segments of higher education in California to identify where we must go, what we must do, and how we may cooperate in the coming years to bring about real educational progress. In addition to effective working arrangements, a core of high-quality instructional materials is being produced and delivered to learners as a model. Access to quality materials will help to point the way to the future.

Although its aim is to externalize the educational process, Outreach will be integrated with the larger institutional process of curriculum development within participating colleges. Project Outreach seeks creative ways to coordinate the work of external instructional systems with the traditional education system.

To launch an effective educational television effort, one which will be viable and significant enough to have nationwide impact, a rather massive national commitment is required. Sufficient financial and professional support of appropriate programs must accompany their advocacy before they can be implemented. Such support, combined with cooperative endeavors among the various institutions of higher learning, can lead to dramatic results in extending educational opportunity.

Included in the requirements for increased federal support of educational opportunity through technology are:

1. *Articulation* of major federal interest in employing advanced technology and learning theory to foster educational redesign, developed with the goal of lifelong learning and diversity of opportunity;
2. Enactment of *legislation* dealing specifically with educational technology, especially television. Such legislation must emphasize cooperative efforts and high-quality production;
3. *Expenditures* authorized through special legislation which facilitates coordinated planning and production;
4. *Identification and initiation* of regional production resources and coordinated arrangements for wide access to quality educational products;
5. *Establishment* of a *national* agency for Educational Technology to facilitate needs studies, identify target populations, coordinate planning, and support research. The latter activity includes consideration of component skill requirements, attitudes, incentives, sharing software, documentation, copyright laws, communication gaps, equipment, and distribution systems; and
6. A *visible national commitment* to achievement of the specific goal of providing increased education to more people at a reasonable long-run participant cost, through television and related communications technologies.

Admittedly, the kind of cooperative, television-centered system we propose is difficult and expensive to implement, especially when, as James Trent has observed, the decline in public support for education "hints at social suicide." Yet, a society depends on a vital education system which constantly improves

and innovates, making higher education better and more accessible to all. Project Outreach merits the support of all citizens, and the government which represents them, for they all stand to benefit from the result.

The impact that a carefully designed and adequately supported program could have on higher education is substantial. The nation's highest priorities and resources should be applied to the development of quality instructional programs which utilize the capabilities of new communications technology to the fullest. Individualized learning experiences should be available to people in all stations of life.

Of the myriad alternative avenues for education being explored today, none has the ability to capitalize on the technology and utilize the potential of an almost universal delivery system as does educational television.

The pieces are there; we need only to put them all together.

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