CALIFORNIA COMMUNITY COLLEGES
AND
COAST
COMMUNITY COLLEGE DISTRICT

#87-0547
The purpose of this project is to assess how satellite-delivered programs can best enhance instructional offerings, community services programs and events, and staff development activities.

The project expects to have the following outcomes:
1. A listing of the major sources of satellite-delivered programming with a basic assessment of the quality and appropriateness of programming and related services
2. A process for previewing, selecting, and acquiring programming
3. Recommendations for when and how to augment satellite-delivered programming
4. Strategies for using satellite-delivered programming
5. Recommendations for organizational and financial policies and procedures necessary to facilitate use of satellite-delivered programming.
Coast Community College District

Using Satellite-Delivered Video Effectively

The purpose of this project is to assess how satellite-delivered programming can best enhance instructional offerings, community services programs and events, and staff development activities.

Satellite technology promises many benefits for California community colleges. In fact, a Community College Satellite Network is currently being planned for California. But the full range of applications and benefits are not generally known, understood, or developed. In an era of declining enrollments, budget limitations, hiring freezes, and elusive equipment dollars, it is imperative that any technology introduced into a college has clearly defined, cost-effective benefits. It is a goal of the project to provide information that will help other colleges make decisions about the potential uses and benefits of satellite-delivered programming.

The ultimate impact of a satellite delivery system will depend on the instructional quality of the programming that is delivered and the integration of that programming into positive learning experiences. Coastline's project addresses the concern for quality programming and effective use of that programming. The year-long project will produce the following outcomes:

- a listing of the major sources of satellite-delivered programming with a basic assessment of the quality and appropriateness of programming and related services
- a process for Previewing, selecting, and acquiring programming
- recommendations for when and how to augment satellite-delivered programming
- strategies for using satellite-delivered programming: (1) in classrooms or as courses; (2) for community service video conferences; and (3) for staff development
- recommendations for organizational and financial policies and procedures necessary to facilitate use of satellite-delivered programming.

These documents will be combined as the complete report of project activities. An executive
summary of the report will be sent to all California community colleges. The full report will be available upon request.
Using Satellite-Delivered Video Effectively

1. Specific Educational Program Being Addressed

Educational Program or Service Addressed

The purpose of this project is to assess how satellite-delivered programming can best enhance instructional offerings, community services programs and events, and staff development activities. The assessment will focus specifically on Coastline Community College, but the recommendations resulting from this assessment will have application to other colleges in the state. As such, the project is aimed at improving instruction through nontraditional methods of delivering instruction and professional staff development.

This project will be a new project, but it will build on the special expertise, related experiences, and insights that so suitably equip Coastline faculty and staff to undertake this assessment. This project will be a cooperative effort of the Offices of Alternative Learning Systems, Instruction, and Community Services at Coastline. Charged with the responsibility of developing new learning systems for use by Coastline and distribution to other educational institutions, ALS brings to the project ten years of experience in curriculum research, instructional design, educational publishing, and video production—all directed to the goal of effectively applying instructional technology. The Office of Instruction provides practitioners skilled in administering and teaching in a distance learning institution. The Office of Community Services contributes the experience gained from successfully designing, coordinating, and conducting seminars, workshops, and conferences for business and industry as well as the community at large. A Telecommunications Review Committee will be formed with representation from the three college divisions. The Committee will determine project policies and procedures and review and evaluate project activities.

Through this project, Coastline will develop valuable recommendations for accessing and evaluating the myriad of options of satellite-delivered programming—including live interactive one-time video conferences, live interactive courses, pretaped video segments of varying length, and pretaped short courses—and for implementing programming so that it enhances learning.
2. Specific Problems Being Addressed

Specific Problem

In an era of declining enrollments, budget limitations, hiring freezes, and elusive equipment dollars, investment in technology may be suspect--if it is possible at all. Yet it is also a time when community colleges must creatively use all resources--human, information, and technological--to prepare Californians to live successfully in a dynamic society and contribute to a thriving economy.

In light of this dilemma, it is imperative that any technology introduced into a college has clearly defined, cost-effective benefits. It is advisable that the technology directly serve the instructional mission of the college and that it complement and enhance teaching and learning in the classroom in addition to facilitating independent study or distance learning.

Satellite technology promises many benefits for California community colleges. But the full range of applications and benefits are not generally known, understood, or developed. "What Can I Do with the Satellite Dish?", the title of an article appearing in the November 1986 CCAIT Newsletter (Community College Association for Instruction and Technology) sums up the lack of understanding quite emphatically.

Indeed, satellite technology is a potent tool for delivering instruction instantaneously over great distances to both remote regions and densely populated areas. Video programming, live or prerecorded, is beamed from a transmitter (uplink) to a specific area (transponder) on a satellite and then beamed down to a receiving satellite dish (downlink). At the receiving site, the programming can be viewed immediately or recorded for later use. A video conference is an example of the first case. A live presentation is viewed in the receiving facility. With fairly simple telephone connections, participants in the receiving sites can talk with the presenter. With more complex equipment, participants at the receiving site can not only interact with but also be seen by the presenter. It is also possible to retransmit the video programming from the receiving site by means of cable television or microwave technology.

Although transmitting live programming seems most appealing, satellite transmission of prerecorded materials, such as telecourses or training videos, is a practical application of the technology. Satellite transmission is generally quicker, less expensive, and more dependable than sending cassettes by mail.

Acquiring a downlink satellite dish for receiving programming is the first and least expensive step in tapping the power of satellite technology. Indeed, there are many potential instructional applications and benefits from simply receiving programming via satellite. Satellite technology can deliver educational programming into the most remote regions and is doing so in India, Asia, Australia, Canada, Alaska, Appalachia and other rural areas of the United States. It can bring the knowledge and insights of experts to students anywhere and extend scarce faculty
resources. Students can have access to cutting edge developments presented by the nation’s leading authorities and leading institutions, real world applications from business and industry, and foreign television broadcasts providing exposure to other languages and cultures. Without proper integration of programming with specified course goals and learning objectives, however, satellite-delivered video may be viewed as little more than interesting classroom filler.

Similarly, video conferences promise to be the source of appealing programming and much needed revenue for community services programs. Initially, the novelty of the technology and opportunity to see nationally recognized authorities will attract participants to video conferences. To continue attracting new participants and to attract repeat participants, video conferences must also help participants accomplish specified goals that cannot be accomplished solely through workshops, seminars, or conferences with local presenters.

In the case of staff development, video conferences will enable faculty and staff to participate with colleagues in regional, statewide, or national meetings without incurring travel expense. Here, too, programming must be engaging, informative, and more effective than locally conducted activities to justify the cost.

The relative newness of the technology also poses aggravating administrative problems. There is no single directory or clearinghouse of available programming. There are several educational teleconferencing services and a plethora of independent producer/distributors, all with slightly different services. Lead time on video conferences is frequently short--for academic scheduling particularly. Without clearly defined procedures for previewing, acquiring, and implementing satellite-delivered video, worthwhile materials will not be used. If that is the case, the investment in technology may not be justified.

Desired Outcome

Thus Coastline proposes to assess the most appropriate and effective ways for incorporating satellite-delivered video into the college’s instructional offerings, community services programming, and staff development activities. The year-long project will evaluate live, interactive video conference programming, prepackaged instructional video materials, foreign language broadcasts, and other programming options available from satellite delivery services. The evaluation will produce the following outcomes:

- a listing and general description of the major sources of satellite-delivered programming
- a basic assessment of the quality and appropriateness of programming and related services available from the major sources
- a process for previewing, selecting, and acquiring programming
- recommendations for when and how to augment satellite-delivered
programming with supplementary activities and materials

• strategies for using satellite-delivered programming: (1) in classrooms or as courses; (2) for community service video conferences; and (3) for staff development

• recommendations for organizational and financial policies and procedures necessary to facilitate use of satellite-delivered programming.

Literature and Current Practice

In a February 1987 paper entitled "Creating a California Community College Interactive Video Teleconference Network," Robert A. DeHart, president of DeAnza-Foothill College and Project Director of the Community College Satellite Network, describes the current applications of live interactive teleconferencing for staff development, community services programming, and statewide or regional meetings. He points out that the potential for improving communication and training through a satellite network is so great that community college systems in three states, Florida, Oklahoma, and Illinois, already have such networks. The article describes a three-phase process for planning a statewide network for California.

Michigan is considering a 13.2 million dollar proposal to establish satellite-based interactive video uplinks at each of the state's four major research universities so that they can deliver graduate engineering programming directly to business and industry. The system will be called the Michigan Interactive Technology Network (MITN).

The ETOM update (Educational Teleconsortium of Michigan) made the following comment about the proposal.

"Michigan's community colleges need to respond affirmatively to the MITN proposal and to forcefully petition the legislature and state government to be included as a partner in the Michigan Information Technology Network."

The State of New York is considering a network to link all of the state's educational institutions, including elementary and secondary schools, public libraries, and the State University of New York's community colleges, four-year campuses, and university centers. A 1985 report from the New York State Senate's Education Committee considered the feasibility of buying a satellite as well as the downlink receivers and uplink transmitters.

Kentucky Educational Television intends to use direct delivery by satellite (DDS) to transmit educational programming to schools, colleges, universities, and public libraries throughout Kentucky. Funding is being provided by the state legislature.

In addition, Congress is considering at least two separate pieces of legislation to use satellite technology to deliver instruction to U.S. public schools. Senator Edward Kennedy's "Star School" proposal calls for $100 million over five years to implement a system to deliver
sophisticated mathematics, science, and language instruction to schools to help rectify weaknesses in those areas and thereby help bolster America's lagging scientific and economic position.

Business and industry are at the forefront in implementing educational applications of satellite technology. Hewlett-Packard, Texas Instruments, WANG, Aetna Life and Casualty, and May Department Stores have established satellite systems for delivering college courses and training to employees at the work site.

Improvements in satellite technology with resulting enhancement of capabilities and decrease in cost promise to accelerate use of satellite communication systems.

Momentum is building toward an almost inevitable result: the creation of interrelated satellite systems with the capability of linking educational institutions throughout the country. The ultimate potential of this interrelated system is truly staggering. The ultimate impact of such a system will depend on the instructional quality of the programming that is delivered and the integration of that programming into positive learning experiences.

Coastline's project addresses the concern for quality programming and effective use of that programming.
3. Population To Be Served

Population Served

The population served by this project can be divided into four categories.

1) Those directly involved in project activities.
   - students in 5 participating classes  125
   - participants in 2 video conferences  150
   - faculty in staff development  50
   - faculty evaluating and using the materials and on advisory committee  8
   - managers on advisory committee and project staff  8

Students and participants will benefit from the information made available to them via satellite technology and by exposure to practical applications of this technology. Faculty and managers involved in conducting the project will benefit from their increased understanding of the educational applications of satellite technology and of instructional design and evaluation procedures. They will also benefit from working cooperatively in a project that crosses divisional boundaries.

The other categories served by the project include:

2) Other Coastline students, community service participants, or staff who will benefit from future applications of satellite-delivered technology.

3) Managers and faculty in other college districts who can employ the results and recommendations from this project to make more informed decisions about applications of satellite technology.

4) Students, community service participants, and staff in other college districts who benefit from use of satellite-delivered programming.
Objectives

Objective 1. Assess information available on satellite-delivered video programming and services
TIMELINE: July 1, 1987 to August 30
BUDGET: $10,157

Objective 2. Establish procedures for reviewing and selecting programming for project
TIMELINE: August - September
BUDGET: $5,690

Objective 3. Review and select programming
TIMELINE: September - November
BUDGET: $11,465

Objective 4. Plan for implementation of programming
TIMELINE: September - June
BUDGET: $12,290

Objective 5. Design, coordinate, and prepare augmented activities and materials
TIMELINE: September - June
BUDGET: $12,263

Objective 6. Implement programming
TIMELINE: January - June
BUDGET: $15,581

Objective 7. Evaluate effectiveness of programming
TIMELINE: January - June
BUDGET: $10,253

Objective 8. Assess the financial and organizational aspects of satellite technology
TIMELINE: April - June
BUDGET: $5,126
Objective 9.
   Develop recommendations
   TIMELINE:    May - June
   BUDGET:     $7,690

Objective 10.
   Disseminate report and recommendations to assist other colleges
   TIMELINE:    Fall 1988
   BUDGET:     $750
Activities

Objective 1.
Assess information available on satellite-delivered video programming and services.

ACTIVITY:
1. Complete literature review and interviews on use of satellite-delivered educational programming.
2. Review information on conducting video conferences.

PERSONNEL:
- Project director
- Project coordinator
- Clerical support

EQUIPMENT, etc.
- Dialog literature search
- Long distance telephone consultations
- Office supplies

Objective 2.
Acquire mobile satellite dish (downlink) and large screen TV.

ACTIVITY:
1. Determine exact specifications and evaluate options.
2. Training for technical personnel.

Personnel
- Project director
- Project coordinator
- Research assistant
- Cable center director
- Telecommunications review committee
- Clerical support
- Technical consultant

EQUIPMENT
- Office supplies and equipment
- Satellite dish and trailer
- Large screen TV

EVALUATION
Committee will review options

Objective 3.
Establish procedures for reviewing and selecting programming for project.

ACTIVITY:
1. Committee considers procedures used by other institutions.
2. Establishes criteria, basic guidelines, and procedures for Coastline project.

PERSONNEL:
- Project director
- Project coordinator
- Committee
- Clerical support
- Video conference consultant
- Community services programmer

EQUIPMENT:
- Office supplies and equipment

Objective 4.
Review and select programming.

ACTIVITY
1. Review information on available programs available for use between January and June 1988.
2. Attend conference relating to teleconferencing.
3. Select and acquire programming.

PERSONNEL:
- Project director
- Committee
- Project coordinator
- 5 faculty
- Instructional designer
- Community services programmer
- Community services presenters
- Staff development specialist
- Program assistant

EQUIPMENT:
- Office supplies
- Acquisition costs

EVALUATION:
- Procedures established under Objective 3

Objective 5.
Plan for implementation of video conferences.

ACTIVITY:
1. Review, make selection, and contract for appropriate sites to best accommodate the video conference and augmented activity.
2. Review marketing options and possibilities of collaborative involvement.
3. Develop and implement a marketing plan and budget.

PERSONNEL:
- Dean, community services
- Community services programmer
- Program assistant
Objective 6.
Design, coordinate, and prepare augmented activities and materials.

ACTIVITY:
1. Develop options for complementary augmented activities and materials to enhance and enrich video
2. Design and produce materials.

PERSONNEL:
Project director
Dean, community services
Community services programmer
Instructional designer
Faculty
Staff development specialist
Clerical support

EQUIPMENT:
Promotional materials

Objective 7.
Implement programming.

ACTIVITY:
1. Conduct 2 community service video conferences: (1) major video conference for general public; (2) video conference on business/industry topic.
2. Promote and conduct 2 staff development activities: (1) topic of general appeal to all instructors; (2) topic relating to one discipline.
3. Use programming in five courses of varying types.
4. Design and offer a course based on programming; e.g., short course on business topic using commercially produced training videos.

PERSONNEL:
Project director
Project coordinator
Community services programmer
Program assistant
Public information officer
Instructional designer
5 faculty
Staff development specialist
Cable center director
Technician
Clerical support
Objective 8.
Evaluate effectiveness of programming.
ACTIVITY:
1. Develop criteria for evaluating effectiveness of materials.
2. Develop instruments for assessing effectiveness, as required.
3. Evaluate effectiveness of programming used in classrooms.
4. Administer questionnaires to students.
5. Administer questionnaires to staff development participants.
6. Community Services staff evaluate video conferences.
7. Administer questionnaires to video conference participants.
8. Analyze questionnaire responses.

PERSONNEL:
Project director
Project coordinator
Community services programmer
Program assistant
Public information officer
Instructional designer
5 faculty
Staff development specialist
Cable center director
Technician
Clerical support

EVALUATION:
This is the evaluation objective for the project
Assess the financial and organizational aspects of satellite technology.

**ACTIVITY:**
1. Prepare report of project activities.
2. Prepare detailed financial report of project.
3. Review reports to pinpoint areas requiring special cooperation among divisions or unique financial procedure.
4. Make recommendations.

**PERSONNEL:**
- Project director
- Committee
- Business affairs manager
- Project coordinator
- Clerical support

**EQUIPMENT:**
- Office supplies

**EVALUATION**
- Will be evaluated under Objective 8

**Objective 10.**
Develop recommendations.

**ACTIVITY:**
1. Review results of evaluations.
2. Review recommendation on financial and organizational considerations.
3. Recommend process for selecting, acquiring, augmenting, and implementing satellite-delivered materials for classroom use, distance learning, community services, and staff development.
4. Submit recommendations to president.

**PERSONNEL:**
- Project director
- Project coordinator
- Committee
- President
- Clerical support

**EQUIPMENT:**
- Office supplies
- Printing

**EVALUATION:**
- The president will review recommendations and evaluate their value in determining policy and procedures for ongoing use of satellite technology

**Objective 11.**
Disseminate report and recommendations to assist other colleges.

**ACTIVITY:**
1. Develop and print executive summary of report with recommendation.
2. Distribute to all California community colleges and selected others.
3. Print full copies of the report for distribution upon request.
4. Present findings at appropriate conferences.
5. If appropriate, investigate possibility of conducting video conference to present and discuss findings. Investigate feasibility of developing how-to handbook based on project experiences and recommendations.

PERSONNEL:
- Project director
- Project coordinator
- Clerical support

EQUIPMENT, etc.
- Printing
- Postage
6. Expected Outcomes

Expected Impact and Transferability

The purpose of this project is to assess the potential for enhancing instruction, staff development, and community services through use of satellite-delivered video programming. This project will enable Coastline to take utmost advantage of these resources and to do so as expeditiously as possible.

If the recommendations from this project are that satellite technology can deliver programming that enhances instruction in a cost-effective manner, college resources will be available for acquisition of programming.

It is a goal of the project to provide information that will help other colleges make decisions about the potential uses and benefits of satellite-delivered programming.
7. Evaluation Plan

Evaluation Plan

This project is an evaluation project. The activities listed with Objective 6 describe the procedures that will be undertaken to evaluate the effectiveness of the programming.

The main outcome of this project will be the set of recommendations and guidelines generated by the evaluation. These recommendations will be submitted to the President and President's Council for review and approval. If approved, the recommendations will guide the use of satellite-delivered programming at Coastline.
8. Dissemination Plan

Dissemination

The outcomes of this project are the collection of guidelines and recommendations described in the outcomes section. These documents will be combined as the complete report of project activities. An executive summary of the report will be sent to all California community colleges. The full report will be available upon request.

Based on the reaction of colleagues to the project's final report, Coastline will investigate the possibility of producing a how-to handbook for potential users of satellite-delivered video programming.
9. Budget Narrative

[NO “BUDGET NARRATIVE” ACCOMPANIES THIS DOCUMENT.]