### 93-0037
Coastline

**Expanding Access and Success through Captioned Telecourses**

<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACKGROUND / INTRODUCTION</td>
</tr>
<tr>
<td>IMPACT ON SYSTEMWIDE NEED</td>
</tr>
<tr>
<td>SPECIFIC EDUCATIONAL PROGRAM BEING ADDRESSED</td>
</tr>
<tr>
<td>SPECIFIC PROBLEMS BEING ADDRESSED</td>
</tr>
<tr>
<td>POPULATION TO BE SERVED</td>
</tr>
<tr>
<td>OBJECTIVES</td>
</tr>
<tr>
<td>WORKPLAN NARRATIVE</td>
</tr>
<tr>
<td>EXPECTED OUTCOMES</td>
</tr>
<tr>
<td>EVALUATION PLAN</td>
</tr>
<tr>
<td>DISSEMINATION</td>
</tr>
<tr>
<td>BUDGET NARRATIVE</td>
</tr>
</tbody>
</table>
Consortium Project.

This project will develop and offer a captioned telecourse and test the usefulness of captioning in improving access and contributing to the success of two special student populations: the deaf/hearing impaired and non-native English language speakers. In addition to making the video lessons available in a captioned format, the project will develop and implement special materials and support services for these two populations. Coastline will disseminate information and materials regarding use of the captioned telecourse to other telecourse- using institutions in California. This project will address the "access" priority of The Board of Governors and the special learning needs of educationally disadvantaged ("LEP") students. It is a two-year project, and requires both a loan and grant to cover project costs.

This project will involve several other institutions and organizations. The Regional Resource Centers for the Deaf and Hard of Hearing at Golden West College and at Riverside Community College have offered their assistance. Specifically, they will provide advice about possible curriculum adaptations or augmentations, as well as support services, which, could increase accessibility to persons with hearing impairments. They will also help in identifying hearing impaired students to participate in the project. The Southern California Consortium for Community College Television (INTELECOM) and the Northern California Telecommunications Consortium will be involved in review of project findings and dissemination to their member colleges.
Broadcast telecourses, similar to those produced and used by Coastline Community College, gained widespread use in California and the nation in the 1970s and 1980s as a vehicle for providing access to nontraditional students—primarily working adults. It is estimated that over 500,000 students enroll in telecourses annually in this country. Telecourses have best served students who have strong learning and study skills.

An unfulfilled potential of telecourses is that they are not being used as successfully by special populations. Adaptation in video, text, and support services appear to be necessary in order to accommodate the unique learning needs of special populations of such under-represented students as the hearing impaired and non-native speakers. Preliminary studies have shown that closed-captioning of instructional television programs appears to enhance learning for both groups. This project will provide a model for using captioned telecourses for these student groups that can be easily implemented by colleges throughout California.
This is a "program development" project that will address the special learning needs of educationally disadvantaged students and will enhance educational services for those students and for working adult students in general.

Most deaf and hearing impaired students require the use of sign language interpreters to ensure their access and success in educational programs. But reliance on sign language interpreters can pose disadvantages. For instance, interpreters may fail to appear at each class. Interpreters of highest skill are not always available. Technical terms are not easily interpreted, and it is difficult for a hearing-impaired student to both watch the interpreter and to take notes. These students are also at a disadvantage when they must learn a concept related to sound or that is explained using auditory references. Hearing impaired students with minor hearing loss may also self-impose a disadvantage by not identifying themselves as hearing impaired and thereby depriving themselves of special services available to them. Most telecourses currently offered by community colleges are not captioned and therefore have not been available to hearing impaired students, but the learning format is ideally suited to special needs: it affords them learning independence, free of the traditional reliance on in-class sign language interpreters.

Telecourses, in general, have not been widely utilized by non-native speakers, yet with specific adaptations, including captioning, could be an exceptional learning option for these students. The availability of videos enables students to replay and review their televised lessons any number of times, which is particularly important for students who may be struggling with the fast-paced English narration or the technical terminology of the specific subject. Also, while the print materials associated with the telecourses -- textbook, study guide, and handbooks -- are all written at a fairly high reading level, (assuming appropriate language skills on the part of the student) the very existence of print materials which are common to all students in the course' serves to "level out the playing field," enabling non-native speakers to focus on professionally prepared materials, instead of trying to study from notes they've struggled to take in typical lecture-format classes.

Recent graduates, or those soon to graduate from E SL programs, generally have excellent motivation and study skills, and are anxious to take credit-bearing classes. The development of support services for non-native speakers and materials to augment
captioned telecourses could provide a very effective educational program option for these students. The dramatic growth in minority and non-native speaking populations who need higher education, specifically those courses which will allow them to transfer to four-year institutions for degrees, mandates that we consider ways of making telecourses more accessible to this group of students.

Research has shown that ESL students can significantly improve their English language skills by watching captioned television. Nationally, over 40% of captioning decoder sales are to people learning English as a second language. Captioning the television programs will assist both ESL students formally enrolled in the course as well as non-native general viewers of the programs when they are available over open broadcast.
There is a need to make educational opportunities more accessible to students who are educationally disadvantaged. Federal legislation, including the Americans with Disabilities Act (ADA), requires educational institutions to make accommodations for students with disabilities. One specific requirement of the ADA is that all new telecourse productions must be captioned beginning in 1994. Technically this is feasible; many television programs on commercial and public television are currently being closed-captioned. However, there are no models for taking instructional advantage of captioning telecourses. Furthermore, captioning only addresses the fact that hearing impaired students cannot hear the audio portion of a video lesson. It does not address other obstacles to learning. For example, people who have never heard may have trouble understanding concepts that are related to sound or are explained in term of auditory references. Other support services will need to be provided so these students can successfully participate in review sessions, group testing, and interactions with the instructor. Therefore, print components of the telecourse must be carefully reviewed and adapted or augmented as necessary, and adequate support services must be considered.

Experience suggests that captioning provides learning assistance to many groups in addition to the hearing impaired. These include non-native speakers, persons with certain types of learning disabilities, and persons whose learning style favors text and visual input over auditory input. Persons from these groups may be at serious disadvantage in classrooms where teaching is done in a lecture format. The video lessons of a telecourse not only present information visually, they frequently present the information in a context that makes it more understandable. Captioning provides another source of visual input that helps reinforce the learning. As with the hearing impaired, the other special populations may need to have special print materials and support services built into the telecourse delivery system in order to take full advantage of all the course components.

Telecourses have provided access to thousands of students who might not otherwise have had the opportunity to pursue a college education. Telecourses permit working adults with multiple life responsibilities to achieve their goals without the requirement of attending weekly campus-based classes. They also give students the opportunity to test their ability to do college-level work in private. This is especially helpful to returning students unsure of their skills and abilities, and would be equally beneficial to
hearing-impaired students and students for whom English is a second language. Perhaps even more significant is the fact that telecourses help students meet general education requirements, especially when classes are filled, thus assisting them in progressing to transfer and degree goals.

This project proposes to make the advantages of telecourses available to students from two special under-represented populations. These students will lack some skills and that lack will make learning more difficult. Therefore, the project will develop and implement materials and services that will help students compensate for their educational limitations.
Two special populations will be served by this project hearing impaired and limited English proficient college students. Hearing Impaired California's Department of Rehabilitation estimates that approximately 881,000 deaf and hearing-impaired individuals in this state fall into the employable age group (16-64). That figure represents 55% of the state's total hearing-impaired population and is also the same age group served by community colleges, a fact which provides strong impetus for community colleges to address the educational needs of these students. According to the October 14, 1987, Federal Register, "... about 60% of deaf students who graduate or drop out of school every year go directly into the labor market in semi-skilled or unskilled jobs or remain unemployed." It further reports that unless specialized and intensive training is made available to this population, 70% will be unemployed as the "number and kinds of jobs they have traditionally filled" decrease due to advances in technology. Without educational intervention, this trend will continue.

In 1991-92, there were 673 students in Region 8 community colleges and 3,404 students statewide who identified themselves as hearing impaired. The actual number of students attending colleges with some form of hearing impairment is probably greater since many people with partial hearing loss are reluctant to identify themselves.

Non-native Speakers. Approximately 4,000 of Coastline's 15,595 students in fall 1992 were in ESL courses. There were also 4,300 enrollments in telecourses, but only 132 of these identified themselves as non-native speakers. Telecourse instructors have informally noted the difficulties of non-native speakers in taking telecourses, including telephone interactions, comprehension of programs and text materials, and performance of assignments requiring writing. Consultation with ESL instructors at the college has identified many ways ESL students in telecourses could be assisted, including supplemental vocabulary lists, access to ESL and basic skills instructors for tutoring and review sessions, opportunities for occasional interaction with other non-native speakers in the course for discussion groups, and full participation in all components of matriculation, including advising students based upon an objective evaluation of their reading, writing, and study skills. Furthermore, counselors, telecourse instructors, and support staff need orientation to the needs of limited English students taking telecourse.
**Objectives**

**Summer '93**
1. Caption 26 programs in the telecourse entitled "Psychology: The Study of Human Behavior" (Psych 100, 3 units).

2. Formulate a position paper describing the learning characteristics and learning obstacles of target audiences, using expert consultants and existing research literature.

3. Define and design initial services and materials for target groups for psychology telecourse.

4. Identify other college services available to the two target groups and prepare for coordinated efforts with other providers.

**Fall '93**
5. Produce special course materials for psychology telecourse, and formulate plans for such special services as decoders, support groups, tutoring, sign interpreters, etc.

6. Gather data regarding ESL students currently and previously enrolling in psychology telecourse to serve as comparison group.

7. Conduct training of support staff in preparation for enrolling target population in psychology telecourse.

8. Promote enhanced psychology telecourse to hearing-impaired and ESL students.

**Spring '94**
9. Offer captioned version of psychology telecourse with enhanced services and materials for target groups.

10. Formulate preliminary conclusions on the effectiveness of captioning and enhanced services and materials from data on the success of students and feedback from students.

11. Ascertain skills levels and strategies which predict success of students in target groups.

**Summer '94**
12. Analyze student performance data and student feedback and prepare preliminary guide for offering captioned telecourses; for review by advisory committee.
13. Revise enhanced psychology telecourse materials in response to evaluation and prepare for dissemination activities.

Fall 1994
14. Offer captioned psychology telecourse at CCC with refinements of services and materials.

15. Conduct two workshops presenting information regarding use of captioned telecourses for Southern and Northern California community colleges.

16. Identify other telecourses which are captioned and orient Coastline instructors for enrolling target student groups.

Spring '95
17. Offer captioned psychology telecourse in other community colleges.

18. Offer at least two more captioned telecourses at Coastline.

19. Prepare and distribute final project report.
Responsibility for completion of this project will be housed in two departments at Coastline Community College, the Instructional Systems Development (ISD) department and the Instructional Television department within the college’s Office of Instruction. The ISD department will be responsible for the captioning of the programs, distribution of those programs to other colleges in California, and dissemination of the project findings. The Instructional Television Office will have responsibility for the offering of the enhanced telecourse at Coastline Community College and preparation and distribution of special materials and services to telecourse students. The primary staff member for the project will be Dr. Gayle Noble. Clerical support will be provided by both ISD and Instructional Television. The advisory committee for the project will be composed of experts in higher education of the hearing impaired and ESL instruction.

The first step in the project will be to contract with the National Captioning Institute for the captioning of the 26 psychology telecourse programs. Working with NCI will guarantee that the technical quality of the captioning will meet broadcast specifications. Coastline will supply the scripts for each program and will monitor the captioning to ensure appropriate timing and accuracy. Once a set of program masters with captioning is created, additional dubbed copies will be made for use in learning centers and for use at the college center so that faculty and staff can become acquainted with captioning and decoder use. It is anticipated that hearing-impaired students will already have decoders, either built-into their home television sets or already purchased for home use. One of the tasks for the project will be to develop a plan to ensure that non-native students who enroll in the telecourse have access to the decoders. It may be necessary to purchase a limited number of decoders and loan or rent them to the students. In addition, television monitors with decoders will need to be available in at least two Coastline learning centers which serve a large population of ESL students.

In the fall of 1993, the project director will be engaged in much of the planning and preparation for offering of the captioned course. In addition to designing and developing special supplemental materials for the two target student groups, there will also be staff development opportunities provided for members of the Instructional Television staff who interact frequently with telecourse students.
Recruitment of students to enroll in the telecourse will begin. Our sister institution, Golden West College, which has a large hearing-impaired student population and is now a Regional Resource Center for the Deaf and Hard of Hearing, will work closely with us, both in the identification of possible students, as well as in the provision of supplemental services. Sign language interpretation and other services will also be provided by Coastline's Office of Special Programs for the Disabled. Because Coastline Community College already has a large ESL program, the project director will also work closely with instructors in basic skills, English, and ESL to identify students who are ready to enroll in the telecourse and to coordinate any additional special services and support for the students.

The enhanced version of the psychology telecourse will first be offered at Coastline in the spring of 1994. Dr. Noble will serve as the instructor for the two sections of the telecourse identified for the two targeted student populations. She will also work closely with the regular psychology telecourse instructor to ensure that graded assignments and tests are consistent with other sections of the course. Information will be collected about both the hearing-impaired and non-native students who enroll in the course, such as number of other college courses completed, educational goals, age, employment status, matriculation assessment scores, etc. Throughout the semester, the project director will remain in close contact with the students by mail, phone, and group sessions to get feedback to monitor student progress in the telecourse.

In the summer of 1994 data collected from the spring semester will be analyzed and a preliminary guide for offering telecourses will be reviewed by the advisory committee. Supplemental course materials will be revised, if necessary, and plans will be made to offer at least two workshops in California about this project. The workshops, to be held in the fall of 1994, will be organized in cooperation with INTELECOM in Southern California and the Northern California Telecommunications Consortium. Participants in the workshop could include telecourse coordinators, telecourse faculty members and support staff, as well as administrators from colleges that are considering learning more about the use of telecourses for reaching these student populations.

Also in the fall of 1994, Coastline will repeat the offering of the enhanced psychology telecourse and begin preparing for the spring offering of other captioned telecourses. In the spring of 1995,
additional colleges in Northern and Southern California will begin offering the enhanced psychology telecourse. The project director will revise the preliminary report based on information from Coastline and from other colleges and prepare the final project report which will be distributed widely.
Other California community colleges will be able to offer the enhanced version of the telecourse in much the same way as Coastline will offer it. They will have permission to reproduce and use the supplemental materials which are developed as part of this project when they offer the course. The report will suggest training options for telecourse faculty and staff and will describe special services which colleges may want to offer. While telecourses are integrated instructional packages, each institution offering the course has the right and opportunity to adapt the course to institutional curriculum and student needs.

It is anticipated that we will attract 25 students of the two target populations to each section of the enhanced telecourse the first semester. In the second semester, a target of 40 limited English section students is anticipated. Once the enhanced psychology telecourse is distributed to other colleges in spring, 1995, we project adoption at ten colleges in the South and eight in the North. Estimating 35 limited English students at each college means that over 700 new students would be reached the first semester of statewide distribution. The number of hearing-impaired students each college will enroll is more difficult to project, but we project that up to 250 hearing-impaired students will enroll in the course statewide.

"Psychology: The Study of Human Behavior" was produced by the Coast Community College District which holds the copyright to the programs. The District also distributes the course to colleges in California and throughout the United States. Once the program masters are captioned, dubbed versions can be distributed to any college for the cost of a new set of videotapes. Also, the new masters can be distributed to the two major telecourse consortia in California, INTELECOM in Southern California and the Northern California Telecommunications Consortium based in Sacramento. This will permit broadcast as well as cassette availability of the captioned version. Both consortia already have licenses to broadcast, and offer this course. Over thirty colleges already offer the course for credit and the availability of a captioned version may make the course even more attractive to colleges as a way to offer distance learning to both traditional and under-represented students.

Coastline will continue offering the enhanced telecourse on an ongoing basis even after the funded project is completed. The funding will cover the costs of the captioning which is a one-time expense, and other start-up costs which are also one-time expenses such as research, development of supplemental
materials, and development of a model. Once the model is developed and tested, the college will be able to regularly offer the course and cover the expenses through the generation of ADA from course enrollment.
The purpose of this project is to design and test an enhanced version of a telecourse to meet the special needs of two target populations: hearing impaired and non-native speakers. Evaluation of the project will be an ongoing component of the project activities and the final report will include recommendations based on what the project staff and faculty have learned from the endeavor.

The Project Director, Dr. Gayle Noble, is a member of Coastline's full-time faculty, and is trained researcher who will be able to design questionnaires and other data gathering and evaluation systems. Dr. Noble holds credentials in basic education, special education, and psychology, making it possible for her to also serve as the instructor for the enhanced telecourse. She has extensive experience working with disabled students and also has taught students with limited English proficiency within a basic skills setting. She has published articles concerning accommodation of disabled students in community colleges and presented at a number of conferences. Additionally, she is currently the chairperson of our college Affirmative Action/Diversity Committee. Dr. Noble will be able to work closely with specialists in problems of both the hearing impaired and ESL populations. An advisory committee made up of these specialists plus ESL teachers and others will review the plans for supplemental services and materials and any evaluation instruments created for the project.

Evaluation criteria for students enrolled in the telecourse will include the following: completion rate, grades and test performance, student satisfaction, rates of student requests for assistance and use of special services, and end of course surveys.

Since captioned telecourses have not been offered for these two special groups, it is difficult to project the number of students who will enroll at Coastline. However, the college will attempt to recruit at least 25 students in each target group for the first semester pilot offering. Part of the evaluation will be to determine how students heard about the special telecourse offering. Recommendations will be made for special promotion efforts which may be necessary to attract the two groups to enroll in other telecourses as captioning becomes more widespread in future years.
The guidebook which is created after the first semester of offering the Psychology telecourse at Coastline will include research findings and analysis. The final report of the project will include information from other colleges which offer a captioned version of the telecourse and recommendations and conclusions about the effectiveness of captioning as a way to expand access of telecourses to new groups of adult students.
The dissemination plan contains two major components: first the captioned version of the psychology telecourse including supplemental materials created to assist ESL and hearing-impaired students. As noted in Section 8 above, this "enhanced" version of the course will be available through the two telecourse consortia in the state.

The second dissemination component is the findings resulting from the first semester offering of the enhanced telecourse at Coastline. These findings, conclusions, and recommendations will be compiled into a "preliminary guide" for offering captioned telecourses to be completed in the summer of 1994. During the fall, Coastline will offer two workshops, one in Northern California and the other in Southern California. At these workshops, the Project Director and perhaps some members of the advisory committee, will distribute the preliminary guide and discuss the process and outcomes of offering the enhanced telecourse.

The final report of the project will contain the findings generated from offering the enhanced telecourse a total of three times at Coastline, and at least one semester at additional colleges in Northern and Southern California. Additional observations may be included which are derived from Coastline's experience of offering other captioned telecourses in Fall and Spring of the 1994-95 academic year.

In addition to the two written reports and two workshops, the Project Director and two Project Supervisors anticipate writing articles and making presentations at conferences. The growing appeal of distance learning, along with the need of colleges to ensure access and success of under-represented students will create much national interest in this project.
[No information provided in this document for this section.]