CALIFORNIA COMMUNITY COLLEGES AND MIRA COSTA COMMUNITY COLLEGE DISTRICT

#90-0037
### Computer Mentor Project

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<th>FISCAL YEAR</th>
<th>ID NUMBER</th>
<th>COLLEGE</th>
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<td>1990-91</td>
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**Proposal Description**

The project will evaluate new computer instructional concepts as working prototypes which can be implemented on a larger scale as funding becomes available. The project will focus on three areas: (1) establishing computer workstations for developing instructional materials; (2) providing training and technical assistance to support faculty in developing new instructional methods; and (3) expanding the availability of computer equipment for faculty. [See also 91-0016.]
The project is designed to evaluate new computer instructional concepts as working prototypes which can be implemented on a larger scale as funding becomes available.

The three areas that the Computer Mentor Project will focus on in 1991-92 are:
1. Establishing advanced computer workstations to facilitate the development of computer generated instructional materials.
2. Providing training and technical assistance to support faculty development of traditional and innovative instructional methods in the classroom environment.
3. Expanding the availability of computer equipment for faculty to develop instructional materials.

Three primary categories of instructional media will be supported in the current mentor program:

- Print Materials—Word processing and desktop publishing documents that incorporate charts and graphics and output as "camera ready" copy produced on postscript laser printers.

- Interactive Instruction—"Real time classroom demonstration using portable carts equipped with a computer, overhead project, and Liquid Crystal Display (LCD) panel that display a computer screen to an entire class. Computer applications can be demonstrated or "electronic slide presentations" can be used to increase the effective exchange of information between faculty and students.

- Hypermedia—Hypertext software allows faculty to interface with CD-ROM and Laser Disc players to create a multi-sensory instructional environment complete with color, sound, full animation graphics, database, and a computer to interface and control the entire process.

MiraCosta College and its faculty are entering into a joint agreement to develop a long term plan to implement an "Electronic Learning Environment" (ELE). This will be implemented through a 40-hour Professional Development Program of Flex In-service Training (Flex), shared computer faculty workstations, technical/design assistance, and faculty purchases of their own personal computer equipment under a contract agreement that supports the tax deductibility of equipment purchases and related home office expenses. Faculty participating...
in the Flex training will have priority time scheduled on the computer workstations. They can also apply for the use of a computer or arrange an interest free loan to purchase their own computer equipment and software.

A team of faculty will be selected to develop a hypertext interface for the Macintosh and Windows 3.0 platforms to access a 50-disc set of The Video Encyclopedia of the 20th Century. Prototypes of instructional materials will be created and evaluated under classroom situations.

A computer fair will be organized to acquaint faculty and students with projects developed under the auspices of the Computer Mentor Project.

A committee will be established to develop a comprehensive long range computer plan for the school. The committee will develop and implement a plan to evaluate the potential benefits that faculty and students will derive from introducing computer technology into the classroom learning environment.
Computer Mentor Project

1. Specific Educational Program Being Addressed

[NO “PROGRAM” ACCOMPANIES THIS DOCUMENT.]
2. Specific Problems Being Addressed

Project Goal

The Computer Mentor Project (CMP) proposes to improve the quality of Mira Costa College's academic environment by increasing the ability of the faculty to utilize word processing, desktop publishing, spreadsheet, database, graphic/illustrating, presentation, and hypertext software in all aspects of their instructional program.

A core group of Mira Costa College (MCC) faculty have used their own funds to purchase personal computers. These highly motivated individuals would immediately benefit from establishing computer workstations at school that provide the expensive peripheral devices like video laser player, postscript laser printers, and scanners.

Other faculty members will be encouraged to acquire their own personal computers as MCC establishes a contract that supports the tax deductible expenses to establish an office in the home of faculty participating in the CMP. Our faculty are presently subsidizing the production of educational materials with computer equipment they have purchased so they may work at home. They put to better use the time necessary to commute to and from school by creating documents in an office in their home.

The CMP addresses three areas to improve the communication of subject matter to students. Three primary categories of instructional media will be supported in the 1991-92 school year:

- **Print Materials**
  Word processing and desktop publishing software incorporates graphics created in spreadsheet and illustrative software applications to produce "camera ready" copy on postscript laser printers.

- **Interactive Instruction**
  Portable carts equipped with a computer, overhead projector, as well as Liquid Crystal Display (LCD) panels allow instructors to display a computer screen to an entire class in a "real time" mode. Computer applications can be demonstrated or an "electronic slide presentation" can be used to increase the effectiveness of information exchanged between faculty and students.

- **Hypermedia**
  Hypertext applications allow faculty to interface with CD-ROM and Laser Disc players to create a multi-sensory instructional environment that has the impact of a TV presentation, i.e. color, sound, full animation graphics, and the database capability of the computer. Instructors can use a computer to access and control other media to present a blended media that is a proven method of communication able to keep the attention of generations of learners who are
sensitized to television.

The computer, when used by a trained user, becomes a tool that multiplies user efforts as compared to traditional methods of accomplishing the same task. The computer literate faculty members make more productive use of their time and the product produced improves in quality. The combination of the computer hardware, software, and training must exist if faculty are expected to "work smarter". The end result of the CMP is to achieve a computer-literate faculty that takes great pride in the production of instructional materials, and this translates into an instructional environment which is charged with teacher enthusiasm thereby motivating students to take an active part in knowledge acquisition and in developing their decision-making skills.

The goal of the CMP is to support faculty efforts to implement computer technology in all aspects of their instructional program. The project will test several innovative concepts by designing trial projects and developing working prototypes. Successful projects would be implemented on a larger scale as funding becomes available. Unsatisfactory pilot projects would be analyzed to see if modifications can be made so the concept could be successfully implemented. Flaws and problem areas identified in pilot projects confine the costs to relatively modest sums of money. This method of analysis and assessment reduces the risk associated with financing major infusions of new technology.

The three areas that the 1991-92 Computer Mentor Project will focus on are:

1. Establishing advanced computer workstations to facilitate the development of computer-generated instructional materials.
2. Providing training and technical assistance to support faculty development of traditional and innovative instruction methods in the classroom environment.
3. Expanding the availability of computer equipment for developing instructional materials by the faculty.

Use of Funds

The FII grant will fund the position of CMP Project Director. The FII loan will finance the purchase of computer workstations and faculty PCS.

Full-time faculty members are targeted in the CMP. A successful training program could be expanded to include staff and adjunct faculty as funding sources become available.

Faculty training will not achieve the desired improvement in the classroom environment unless an infrastructure of appropriate hardware and software is also available.

Funds from the interest-free loan will be used to establish three computer workstations at the main campus in Oceanside. One work station will be established at the satellite campus at San Elijo. Macintosh, Windows 3.0, and Amiga computers will be supported so that all faculty members will have access to the platform of their choice. The workstations will cost $40,000
3. Population To Be Served

Target Population

Full-time faculty who participate in the 40 hour Flex computer training receive the equivalent of 8 days salary. They will also receive technical assistance and priority access to the CMP workstations throughout the year. Only faculty members who are accepted into the Flex computer training will be eligible for the interest-free loan or use of a computer for the duration of the training program.

Faculty who upgrade their computer skills and acquire their own personal computer equipment are highly motivated individuals. This allows limited school resources to be spent so the students will receive the full benefit of interactive computer technology. The loan request will be spent on the acquisition of highly specialized workstation equipment and to provide no interest loans to the faculty to purchase their own personal computer equipment. A $5,000 computer purchase at 20% interest over three years would cost the borrower $2,000 in interest. Interest-free loans would reward faculty members who participate in the computer training program.

The Flex Computer Training Program (FCTP) will use Computer Assisted Instruction (CAI) software to individualize the instruction format. This allows each faculty member to proceed through the computer tutorials and access information at their own pace: The 10 faculty members who receive training will "adopt" another faculty member as part of the 1992-93 FCTP. Peer group cooperation and interaction between computer users will speed the process of introducing the technology to other faculty.

The 1991-92 Mentor project will be collaborative effort between disciplines to develop a hypertext application to access The 20 Video Encyclopedia of the 20th Century, a 50 disc collection of video segments. A team of 3 to 6 faculty will develop individual lessons to augment their classroom instruction with video presentations derived from individual laser discs using "Plus", a "user friendly" hypertext authoring system, that supports both Macintosh and Windows 3.0 platforms. The "look and feel" of the software interface is identical, thus data files can be easily exchanged with other instructors use of the materials will not be restricted by the choice of computer platforms.
[NO "OBJECTIVES" ACCOMPANIES THIS DOCUMENT.]
5. Workplan Narrative

[NO “WORKPLAN” ACCOMPANIES THIS DOCUMENT.]
6. Expected Outcomes

EXPECTED OUTCOMES

Potential For Adoption by Other Institutions

The concepts of the CMP will be useful to any community college campus, but it will be especially valuable if the faculty use multiple computer platforms. Rather than attempting to force the computer user to change their choice of computer, the CMP supports the development of quality instructional materials on Macintosh, Windows 3.0, and Amiga platforms. Each platform has advantages and disadvantages that vary according to the discipline in which they are used.

Data exchanged between these platforms is encouraged in the MCP. The adoption of preferred software applications simplifies the training and support efforts provided by the CMP; however, any faculty member can use the equipment if they provide their copy of non-adopted software application. Such applications can only be temporarily loaded onto the workstation hard drives.

Each faculty member is encourage to use a 45 MB SyQuest removable cartridge to store and transport data and non-standard applications from home to school. All workstations will be equipped with the 45 MB removable drives. Eventually the portable computer presentation carts will be equipped with the 45 MB removable drives. Also, this equipment serves as a security measure since copies of examinations and quizzes would not be stored on workstation hard drives.
7. Evaluation Plan

Project Evaluation

All faculty members participating in the Flex In-service training will be pretested to determine the level of their computer skills for specific software applications. As skills are acquired they will be checked off.

The training program will be evaluated by the MCC Computer Instruction Committee. Samples of print materials submitted to the MCC Copy Center will be reviewed and rated.

Peer interaction and design review will be a part of the Flex training as an ongoing evaluation process. Faculty projects will be presented and discussed to encourage constructive comments about the design of instructional materials.

Interactive hypertext computer instructional products such as *The 20 Video Encyclopedia of the 20th Century* are much more difficult to evaluate. A third party reviewer will be used to observe classroom presentations and to conduct a survey of the students.
8. Dissemination Plan

Dissemination of Information

The 10 teachers enrolled in the 1990-91 computer training program will serve as trainers in the 1991-92 FCTP. Each faculty member who receives training will "adopt" another faculty member and provide assistance by phone outside normal school hours. Peer group cooperation and interaction between computer users will speed the process of introducing the technology to other faculty.

The CMP will sponsor a Spring Computer Fair that will demonstrate how students of participating faculty members are benefiting from computers being used in the MCC electronic learning environment. The fair would be open to all staff, faculty, and students of MCC. Representatives of computer hardware and software would be invited so the attendees would be able to preview new technology. This is considered the most effective way to expose faculty to potential ideas for future computer projects that should be included in a long range technology plan for MCC.

Special seminars and workshops will be scheduled depending on schedules of factory technical representatives.
9. Budget Narrative

[NO “BUDGET NARRATIVE ACCOMPANIES THIS DOCUMENT.”]