

**Executive Summary of the Results of the Program Review of the
High Tech Center Training Unit (HTCTU)
Review dates: October 29-31, 2002**

Report Content

This report details program review commendations, compliance issues and recommendations in each of three areas. Summarized in the section are the findings from the review in each of three functional areas of focus—operational compliance, technology deployment, and responsiveness to the field.

Results in Brief

Operational Compliance

Commendations:

- Visionary leadership resulting in a Center nationally recognized for excellence
- Support for the HTCTU by the DeAnza College Administration
- Clear reporting relationships between DeAnza College and the HTCTU
- Excellent fiscal management support from the Foothill-DeAnza Community College District Office
- Redundant fiscal monitoring systems in place
- Transparency in the nature of the relationships between the HTCTU and vendors
- Knowledgeable and capable staff, exhibiting effective teamwork
- Staff involvement in relevant committees statewide
- Readily available policies and procedures
- Job descriptions and non-confidential employee documents available
- Purchase records are complete and well organized
- Warranty and service contract information available for review
- Complete records of High Tech Center Training Unit (HTCTU) Advisory Committee meetings and recommendations
- Documented timely and appropriate communication with Project Monitor
- Well documented needs assessments supporting HTCTU operational decisions
- Instruments and procedures in place to evaluate training activities
- Accessible Website and program offerings
- Remarkable progress made in DeAnza College's Section 508 compliance
- Regular training evaluations conducted
- Annual project reports submitted in an appropriate and timely fashion.

Compliance Issues:

There were no observed compliance issues relative to HTCTU operations.

Recommendations:

1. Establish fixed terms for HTCTU Advisory Committee members, with some rotating off annually and stipulations regarding allowable unexcused meeting absences. Post Advisory Committee to the website in a timely manner.
2. Assume a lead role in conducting a study of the role of assistive technology in realization of desired learning outcomes.
3. Increase the number of workstations in the HTCTU learning laboratory that are wheelchair accessible and eliminate power strips and electric cords on floor.
4. Continue to obtain staff development for the administrative assistant on fiscal operations, including FRS and BRIO software used by the Foothill-DeAnza Community College District Office.

Technology Deployment

Commendations:

- High levels of staff knowledge of and abilities to apply assistive technology
- Obvious staff enthusiasm for the work that they do
- Excellent training staff utilizing interactive styles, encouraging participant involvement
- Excellent assistance provided to colleges on Section 508 compliance
- Timely and valuable responses to technical assistance requests from colleges
- Well-equipped laboratory workstations, with current and appropriate technologies
- Good linkages to field developments through newsletters and other means
- Excellent knowledge of specialized software and interactions with other programs
- Appropriate staff interactions with product developers and vendors
- Thorough and timely product reviews completed
- Good use of the listserv to share information with the field
- Overwhelmingly positive participant ratings of HTCTU trainings and services
- Overwhelmingly positive results from the statewide survey of HTCTU activities.

Compliance Issues:

No compliance issues were identified with regard to technology deployment.

Recommendations:

1. Some improvements could be made in the design of the HTCTU Website and in the information provided (e.g., more clear contact information, scalable fonts).
2. Information provided via the Website and listservs needs to be augmented with other prompts to the field such as DSP&S Regional Coordinator meetings, Professional conferences, and publications/periodicals that support disability professionals such as CAPED/AHEAD.

3. Exploration of opportunities for participation in modified beta testing and/or pre-market product previews of new technologies should be considered.

Responsiveness to the Field

Commendations:

- Multiple avenues (e.g., listservs, e-mails) are used to communicate with the field
- Data gathered from the field is managed in a systematic fashion
- Various ways of dealing with field-generated recommendations are considered
- Variation in learning styles and paces are taken into account by HTCTU training staff, and individualized attention is provided to trainees when needed
- Well-designed training handbooks, guides, and other materials
- Information always made available in alternate and accessible formats
- Careful attention to the re-design of the HTCTU Website to optimize access
- Staff commitment to staying informed on technology developments/applications
- Staff openness to different views on doing things and addressing issues
- High degree of team effort and organization in responding to issues.

Compliance Issues:

No compliance issues were identified with regard to responsiveness to the field.

Recommendations:

1. Encourage the development of accessible distance learning technologies that would further an expansion of training capacity.
2. Commit to continuously improving the training enrollment process to: 1) provide more training slots, and 2) give earlier notice to people accepted for training.
3. Consider stratifying training according to competency levels (i.e., beginner, intermediate, advanced), providing a more tailored learning experience.
4. Continue to support a staff development program to ensure that HTCTU personnel, especially new staff remain or become current on instructional technologies and their applications.
5. Continue to explore innovative ways to communicate with the field, with the goal of reducing time spent in individualized e-mail responses.

Details of the recommendations for all three sections are provided in the full report that follows.

**Report of the
High Tech Center Training Unit (HTCTU) Review**

**Conducted by the Galvin Group, L.L.C.,
Consultants from California Community Colleges, and Independent Experts
at
The High Tech Center Training Unit (HTCTU)
DeAnza College, Cupertino, California
October 29-31, 2002**

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Following an overview of the Statewide Centers review process, this report presents results in three sections:

- Operational Compliance. This section covers issues related to compliance with requirements specified in the Request for Applications (RFA) issued by the Chancellor's Office and subsequent project agreement executed between the Chancellor's Office and the grantee;
- Technology Deployment. This section covers awareness of and use of current information/instructional technologies in designing and delivering training services that represent the state-of-the-art applications designed to provide access to educational opportunities.
- Responsiveness to the Field. This section covers responsiveness to the needs of the California Community College System, DSP&S and High Tech Center, Alternate Media, and Web Accessibility personnel within the system.

In each section, the report provides commendations, presents any identified issues related to compliance with agreed-upon performance requirements, suggests issue resolution strategies, and includes other recommendations designed to enhance Center operations. The final page of the report provides guidance to the Center on the written response to this report required by the Chancellor's Office.

The Review Team members extend their thanks to the HTCTU Director, staff, and others who gave generously of their time and effort in preparing for and facilitating the review. The hospitality extended to the Review Team was outstanding.

Background of CCC Center Reviews

The Chancellor's Office of the California Community Colleges has statutory responsibility for monitoring the operations of Community College Service Centers established and operated with support from State-allocated funding sources. The responsibilities assigned to the Project Monitor in the Chancellor's Office were articulated in the requests for applications (RFAs) for service centers and include:

- Approving workplans, revisions to workplans, and annual budgets prepared under grants supporting Center operations;
- Approving any changes in Center staffing patterns for funded projects after a grant award is made;
- Assuring that any equipment purchased or paid for by the State under the awarded grant shall be the property of the State, with vesting of the Title to such equipment to the State;
- Reviewing grant activities prior to each anniversary date and considering amendments to proposed plans by the Chancellor's Office or by the host site in a timely manner to assure continuation of the project from year to year;
- Overseeing the RFA competitive bid process when it is used for awarding of the grant at least every five years;
- Ensuring that materials developed for public distribution are approved by the Project Monitor prior to duplication and distribution; and
- Ensuring ongoing contact with the Grantee's Project Monitor.

The Project Monitor has the authority to conduct reviews of Centers as may be necessary to ensure compliance with the terms of grant awards made pursuant to issuing of requests for applications. Such reviews may involve on-site assessments of Centers' operational components conducted by staff of the Chancellor's or by an independent contractor selected by the Chancellor's Office and operating under specific guidelines and directives for the conduct of reviews. The independent contractor selected for the HTCTU review was the Galvin Group, L.L.C., of Tucson, Arizona.

Purpose of HTCTU Review

As defined by the Chancellor's Office, the purpose of the HTCTU review is to gather data needed to provide answers to the following evaluation questions:

- Is the HTCTU providing services effectively and administering the grant in a uniform and proper fashion?
- Are the HTCTU's activities allowable, appropriate and a benefit to the DSP&S Programs?
- Is there evidence of high quality in the record keeping, data collection, and tracking systems associated with the delivery of services by the HTCTU?
- Do the HTCTU's activities strengthen the Chancellor's Office commitment to the prudent expenditure of appropriated funds for reasonable and necessary programs and services?
- Are data available for use in assessing the colleges' use of and satisfaction with the HTCTU's grant programs and services?
- Are there opportunities for HTCTU program enhancements?
- What are the HTCTU's strengths?

Using survey methods and a review team assembled with support from the Galvin Group, data were gathered for use in answering the evaluation questions articulated above. The HTCTU review was conducted in accordance with the guidance provided by the Chancellor's Office and in keeping with the terms and specifications of the individual Request For Applications to which the HTCTU responded and the commitments made by the HTCTU in the workplans and agreements executed at the time of a grant award or through subsequent award modifications. The review, involving experts in instructional and informational technologies as part of the Review Team, also included recommendations for alternative approaches to service delivery that might be considered by HTCTU staff in their efforts to provide superior quality services to the California Community Colleges.

During the on-site portion of the HTCTU review, the Review Team focused on:

- Quality, effectiveness, and efficiency of HTCTU services;
- Strengths and exemplary practices of the HTCTU;
- HTCTU compliance with specifications detailed in the Request For Applications (RFA) and in workplans and agreements executed subsequent to grant awards;
- HTCTU compliance with: Title 5, the ADA, Sections 504 & 508 of the Rehabilitation Act of 1973 as amended; The California Community Colleges Guidelines for Producing Instructional and Other Printed Materials in Alternate

Media for Persons with Disabilities.  The California Community Colleges Distance Education: Access Guidelines for Students with Disabilities. 

- Indicators of HTCTU responsiveness to the needs of the California Community Colleges, students with disabilities enrolled in California Community Colleges, and programs and service operations (e.g., DSP&S) established and operated to support student with disabilities enrolled in California Community Colleges; and
- Factors that affect HTCTU operations and service delivery effectiveness.

Overview of the Review Process

Prior to the site visit on October 29-31, 2002, a handbook was prepared by the Contractor providing detailed information about the process of the review, the role of the HTCTU and its staff members in the review process, and the role of the Review Team—including external experts—in the review process. On October 2, 2002, a meeting was convened at the HTCTU offices to explain the review process and the expectations for the HTCTU staff and the Review Team members and to answer questions regarding the conduct of the review. The meeting on October 2 was attended by the full staff of the HTCTU and by representatives of the Alternate Text Production Center (ATPC) that is scheduled to be reviewed in May 2003. Peggy Tate, the Chancellor's Office Project Monitor, and Scott Hamilton, DSP&S Coordinator in the Chancellor's Office, also participated in the meeting on October 2, 2002.

Following the preparatory meeting convened at the HTCTU on October 2, 2002, the HTCTU Director worked with the Review Team Leader to assemble materials for distribution to team members prior to the review. The HTCTU Director and Project Monitor provided the Galvin Group with a large volume of materials, including extensive documentation of needs assessed, trainings conducted, trainee satisfaction results, and administrative procedures followed. These materials were provided in a combination of print and electronic formats. Some materials—particularly those generated by the DeAnza College administration (e.g., purchase orders, vendor policies)—were available only in print formats. Because of the abbreviated timeframe between the meeting to discuss review requirements on October 2, 2002 and the actual scheduled start of the review on October 29, 2002, the Review Team Leader made determinations regarding which HTCTU documents were most critical to various Review Team members. Selected documents were distributed to specific

¹ Chancellor's Office, California Community Colleges (2000). *Guidelines for Producing Instructional and Other Printed Materials in Alternate Media for Persons with Disabilities*. Sacramento, CA: California Community Colleges, Chancellor's Office.

² Chancellor's Office, California Community Colleges (1999). *Distance Education: Access Guidelines for Students with Disabilities*. Sacramento, CA: California Community Colleges, Chancellor's Office.

team members, along with instructions for review, in early October. Most team members were provided print materials and a compact diskette with electronic documents on it. One team member requested and was provided pre-review materials in electronic format only.

The Onsite Review

On the morning of October 29, 2002, the review team assembled at the Cypress Hotel in Cupertino, and the Team Leaders explained the review process, clarified team member roles, and answered questions regarding the conduct of the review and the way in which information from the review would be handled. Because two of the team members were not employees of the California Community College System (CCCS), some time was spent discussing services made available to students with disabilities through College DSP&S Offices, the expectations of system-wide service centers, and legal, statutory, and contractual obligations of the service centers that received funding through the Chancellor's Office. The team members from CCCS colleges assisted team members with the Galvin Group in providing background information regarding the system and services for students with disabilities to the two team members who were not affiliated with CCCS institutions.

At noon, the Review Team arrived at the HTCTU, and an orientation session with the team members and the HTCTU staff was convened in order to: 1) introduce the team members and summarize their roles and expertise; 2) introduce HTCTU staff members and explain their functional responsibilities within the HTCTU; 3) explain how the review would be conducted; 4) finalize interview assignments and arrangements; 5) ensure availability of print and electronic documents needed for the on-site portion of the review; and 6) answer questions regarding the review process and the use of information generated through the review. HTCTU participants in the orientation and subsequent review activities are listed below, with the HTCTU Director listed first and the staff listed alphabetically by last name.

Carl Brown, HTCTU Director
Bong Deiparine, Secretary
Gaeir Dietrich, Alternate Media Training Specialist/Instructor
Michael Fosnaugh, Administrative Assistant
Dale Kan, Network Specialist
Sean Keegan, Web Accessibility Training Specialist/Instructor
Sam Ogami, Assistive Computer Technology Trainer

Following the orientation, the Review Team members were given a brief tour of the HTCTU facilities. The facilities, housed within a one-story facility adjacent to the DeAnza College campus, are comprised of a computer-training lab, a conference room, a library, and staff offices. The building is barrier-free and accessible by public transportation and freeway systems.

As noted previously, the review process involved three focal areas: 1) operational compliance; 2) technical deployment; and 3) responsiveness to the field. Although team members were assigned primary responsibility for these components—i.e., Galvin Group members examined operational compliance, external technology experts examined technical deployment issues, and CCCS college personnel examined responsiveness to the field—all Review Team members were actively engaged in looking at all aspects of HTCTU operations. In fact, because of the obvious overlap in the areas of technical deployment and responsiveness to the field, much of the interviewing of HTCTU staff and observation of training was done jointly by external reviewers and CCCS college personnel. This approach allowed opportunities to not only determine how technology was being used in training and technical assistance activities, but also to assess its appropriateness in light of CCCS staff for whom training and technical assistance services were designed. Conducting the review *in this* fashion allowed for different perspectives to be brought to the interviewing and observational processes, providing a much more comprehensive analysis of operational effectiveness than might have been realized simply through one-on-one interviews and individual observations of training activities.

All team members reviewed a large number of documents relating to HTCTU operations and services, participated in on-site interviews with senior Foothill/DeAnza administrative personnel who oversee HTCTU operations and supervise HTCTU staff, as well as with HTCTU Advisory Committee members, Contractors and training activity participants. In addition, a survey was developed and made available electronically to all CCCS High Tech Center and Alternate Media Specialists, DSP&S Coordinators, College Chief Student Services Officers, Advisory Committee members; and California Virtual College (CVC) personnel. This survey was designed to collect data regarding perceptions of the quality and appropriateness of HTCTU training and technical assistance. The questions developed for this survey were extracted from the RFA and the HTCTU's program plan. The survey and a summary of results are provided as an attachment to this report.

Overview of HTCTU Operations

The Chancellor's Office DSP&S Unit allocates funding to the Foothill/DeAnza Community College District to operate the High Tech Center Training Unit (HTCTU), which is housed in a facility located in a leased building adjacent to the DeAnza College campus. The HTCTU is a training and support facility for the California Community College High Tech Center Specialists, Alternate Media Specialists, and other Community College personnel wishing to acquire or improve teaching skills, methodologies, and pedagogy in the use of assistive and instructional computer technologies, alternate media technologies, and web accessibility technologies. The HTCTU also reviews and tests new and emerging technologies of potential benefit to students with disabilities.

TABLE 2: HTCTU Staffing as of October, 2002

#	FTE	Position	Hours Week	Funding Source	
				Grant	Other
1	1.00	Director	40	100%	
1	1.00	Web Accessibility Trainer	35	100%	
1	1.00	Alternate Media Trainer	35	100%	
1	1.00	ATC Trainer	35	100%	
1	1.00	Administrative Assistant	40	100%	
1	1.00	Secretary	40	100%	
1	1.00	Network Technician	40	100%	

The HTCTU provided over 75 training workshops to more than 530 individuals from California Community Colleges within the state during the 2001-2002 academic year. These training activities provided by the HTCTU include but are not limited to:

- ACT for Windows 98
- ACTICT
- Advanced Web Accessibility Concepts
- Braille Grade One
- Braille Grade Two
- Captioning Digital Media
- Creating E-Text
- Dancing Dots
- Designing Accessible Web Pages
- Designing Accessible Forms & Tables
- Dragon Naturally Speaking
- Introduction to Alternate Media

- JawBone
- JAWS for Windows 98
- JAWS 3.5 for Internet Explorer 5.5
- JAWS 4.0 & Internet Explorer 6.0
- Kurzweil 3000 & Inspiration
- Rapid Text
- Tactile Graphics
- Tiger Embosser
- Transcribing Duxbury
- The Basics of Duxbury & Embossing
- Using Software in Curriculum Development
- Web Course Curriculum
- Applications (WebCT/Blackboard)
- WebCT: Universal Design and Accessibility

Additionally, the following specialized training workshops were provided:

- A one-day training on Creating E-Text from hard copy or electronic files
- A one-day training in the use of Duxbury software to transcribe text into Braille
- A one-day training exploring the process of Creating Tactile Graphics usable by blind and visually impaired students
- A one-day training on Designing Accessible Web based Forms and Tables including the use of tables for presentation purposes as well as organizing data
- A one-day training on using JawBone to combine JAWS with Dragon Naturally Speaking.
- A one-day training providing an overview of what Alternate Media is and how it is produced
- A one-day training designed to teach participants to read and write Grade One Braille
- A two-day training designed to provide participants with an introduction to reading Grade Two Braille
- A one-day training in Captioning Digital Media and exploring the accessibility of different media types and usability of multimedia on the World Wide Web
- A one-day workshop Using Advanced Web Accessibility Concepts including cascading styles sheets and accessible templates to accelerate website accessibility

Other Center activities include:

- Attendance and/or presentations at over 20 conferences and workshops

- Development of a set of seven videotapes documenting the basic usage of all core assistive technologies used by High Tech Centers around the state. This series of videotapes was provided to every DSP&S Coordinator and Library Director in the California Community College system
- Loan of BrailleNote systems to qualified students who are blind
- Upgrading the Alternate Media Exchange (AMX) database, formerly the BookExchange, supporting shared information about captioned videos and tactile graphics as well as books that have been converted to alternate formats
- Operation of several listservs (e.g., DSP&S Coordinators listserv) for the CCCS.
- Cooperation with the Professional Development Center for the California Virtual College (CVC) in using Web CT to develop a training on creation of accessible web pages using CT course development tools
- Training and support of the processes and technologies required to caption videos
- Provision of technical support and equipment on loan to the newly developed program at California Department of Corrections, Folsom State Prison, Folsom Project for the Visually Impaired, which provides inmates with an opportunity to learn about the production of closed-captioned video, web accessibility, and alternate media; and provides community colleges with these services at minimal cost to the colleges.
- Cooperating with the Alternate Text Production Center (ATPC) in responding to the needs of the field with regard to provision of materials and resources in formats other than standard print and in devising strategies for improving responsiveness to field generated-needs.
- Responding to special project requests initiated by the Chancellor's Office (e.g. standardized on-line application, captioning legal opinion, specialized statewide resources on Distance Education and Alternate Media Production).
- Distributed Training Program for specialized instruction on assistive technology applications.
- Development of the distributed scanning network, which houses high-speed scanners at a number of colleges throughout the state in an effort to increase the production of electronic text for students.

In addition to all the designated activities, HTCTU staff provide technical assistance to a large number of college staff via email, telephone, and when funding permits, on-site technical support.

Introduction Summary

The results from both the electronic field survey and the on-site review visit provide an overwhelmingly positive picture of HTCTU staff and activities. Commendations and recommendations generated from the HTCTU review are detailed in ensuing sections of this report. A summary of the results of the survey conducted in association with the review is provided as an attachment to this report.

Operational Compliance

General Observations

Documents provided and the on-site review both suggest that the HTCTU is very cognizant of its responsibilities with regard to process issues and grants administration. There is a very thorough and well organized set of documents—some in print formats and some in electronic formats, providing a clear history of: 1) how the HTCTU has used its grant funding; 2) equipment, supplies, and services that have been purchased with grant funds; 3) personnel who have been paid from grant funds; and 4) travel and other expenses that have been charged to grant resources. Like all units operating in larger organizations, the HTCTU is reliant to some extent on other units of the organization to provide operational information in a timely manner, and not all information is provided to the HTCTU in formats that it would prefer. However, there is clear evidence that the HTCTU is extremely diligent about documentation issues. In most instances, there are redundant systems in place to document use of grant funds (e.g., detailed electronic ledgers of grant expenditures by cost category, providing back-up to records maintained in the Foothill-DeAnza Community College District Office), and there are excellent working relationships between HTCTU staff and staffs of the Foothill-DeAnza Community College District and DeAnza College, facilitating accurate record-keeping. Adherence to grants management guidelines was obvious and demonstrable in the records provided prior to and during the HTCTU review visit.

In addition to compliance with grants management procedures and requirements, it was very obvious that the HTCTU has complied with requirements stipulated in the RFA and in its executed funding agreement with Chancellor's Office in terms of functional responsibilities. There was a wealth of evidence that the HTCTU has been providing the services that it had agreed to provide, including personnel training on access technologies, technical assistance on a variety of technology-related issues, and evaluation of new/emerging technologies. It has also been active and effective in

outreach activities through participation in conferences, operation of listservs, and other activities designed to inform and engage personnel in the CCCS.

The survey results indicate that 36 of 142 respondents (approximately 30%) noted the lack of training opportunities in other parts of the state. Comments obtained through this electronic survey noted that HTCTU activities were sometimes difficult to attend in Cupertino, particularly for personnel from smaller colleges in remote areas of California. Survey respondents reported difficulty in attending trainings involving travel costs beyond the amount reimbursed by the HTCTU, and/or time away from work responsibilities. While the HTCTU does provide reimbursement for travel and lodging, the colleges bear the cost of per diem expenses and the provision of “coverage” at their college while staff is attending trainings. While this does represent a legitimate concern on the part of the colleges, it also represents a compliment to the HTCTU. The trainings provided by the HTCTU are clearly highly regarded by college personnel from around the State, and they would like to be able to access such trainings more easily and frequently. Although the HTCTU has held a number of trainings in other locations, attendance at these trainings has not been as high as would be expected given the purported interest stated by some in the field and reflected in comments provided by about a third of the survey respondents. Also noted is the fact that the HTCTU has provided ‘on-demand” training on core technologies through a video series. The HTCTU also encourages colleges to apply for the “Distributed Training Program,” which provides opportunities for offering area-wide trainings in different parts of the State, with HTCTU staff participation.

Notwithstanding efforts already underway (e.g., videotaped training, distributed training options) to expand training opportunities for personnel in different geographic locales, the HTCTU is encouraged to continue exploring alternate methods for delivering accessible instruction on assistive technology that is cost-effective and that focuses on ensuring availability to all colleges within the system. The HTCTU does a remarkable job of providing high quality trainings to a large portion of its targeted constituency each year using a relatively small staff and limited resources. It is to be commended for the job that it does and encouraged to keep looking at innovative ways to maintain and expand its excellent services for all persons who can benefit.

Commendations:

- The HTCTU is led by a visionary director who has taken the requirements of the RFA and developed a Center with a national reputation for excellence.

- There is clear support for the HTCTU by the senior administration of DeAnza College, facilitating excellent operational interactions between the college and the HTCTU.
- Reporting relationships between the HTCTU management staff and college administration are well defined and appear to work very effectively.
- There is excellent fiscal management support from the Foothill-DeAnza Community College District Office, providing timely and accurate data on grants income and expenditures, and communication between the District Office and the HTCTU is frequent and appropriate.
- Redundant, detailed records of fiscal operations are maintained in the HTCTU offices, providing excellent capabilities for monitoring the accuracy and completeness of District accounts and fiscal reports.
- There is clear documentation of relationships with vendors and other commercial partners, providing transparent records of the nature of such relationships and their appropriateness.
- HTCTU staff members are extremely knowledgeable, effective in their respective roles, and exhibit an excellent working dynamic.
- Staff serve on all relevant committees and provide a wealth of technical assistance and consultation to all parties with whom they interact.
- Copies of required policies and procedures are readily available to staff and others in print and electronic formats.
- All job descriptions and other employee-related materials appeared to be current, and those that were not of a confidential nature were available for review.
- Records of all purchases of equipment, supplies, and services are meticulously maintained so that tracking can be easily completed.
- All warranty information, service contracts, and related documents are filed appropriately for easy retrieval and review.
- Records of High Tech Center Training Unit Advisory Committee meetings and communication with the HTCTU Advisory Committee were carefully maintained and available for review.
- Communication with the Chancellor's Office Project Monitor on key operational issues is timely and appropriate, and records of such communication, including purchase approvals and other operational documents, are maintained in print and/or electronic formats.
- Needs assessments are completed in a timely fashion, providing support for operational decisions of the HTCTU.
- Appropriate procedures and instruments are in place for assessment of training and technical assistance activities of the HTCTU.

- The HTCTU’s Website is accessible to people with disabilities, as are its training programs and other services.
- DeAnza College is making remarkable strides in developing a policy, set of procedures, and set of transition plans for addressing Section 508 of the Rehabilitation Act of 1973, as amended.
- The HTCTU provides for electronic evaluations by all training participants, which are then analyzed and reported on a regular basis to the Chancellor’s Office Project Monitor.
- Annual reports on grant-related activities are thorough and are submitted in a timely fashion to the Chancellor’s Office Project Monitor.

Compliance Issues

No compliance issues were identified with regard to operations of the HTCTU. The HTCTU is operating in full compliance with the requirements specified in the RFA and in the executed grant agreement between the HTCTU and the Chancellor’s Office. In fact, it was clear during the review that the HTCTU has systematically sought ways in which to provide added value to its services to the field through needs studies, technology support services, and other activities that go beyond the scope of work specified in the RFA and the grant agreement.

Recommendations

1. Observation Supporting Recommendation: It appears that many of the High Tech Center Training Unit Advisory Committee members have been serving for lengthy terms (e.g., 5-10 years or more in some cases). It also appears that some High Tech Center Training Unit Advisory Committee members are not active in HTCTU activities, and as such may not be representing their Colleges, Districts, and/or Regions effectively.

Recommendation: Establish recommendations for High Tech Center Training Unit Advisory Committee service terms (e.g., three years, with 1/3 of Committee rotating off or re-elected by their region each year), and establish “ground rules” for Committee service (e.g., create a limit of one absence from a meeting, when they do not arrange for a substitute, within a specific timeframe). This modification would provide opportunities to bring fresh perspectives and allow for involvement of more individuals from the field in HTCTU development and support. It would also offer a mechanism to remove inactive members from the Committee, creating opportunities for persons who want to be actively involved in HTCTU activities. In addition, minutes from the High Tech Center Training

Unit Advisory Committee meetings should be posted to the website in a timely manner.

2. Observation Supporting Recommendation: The HTCTU has the capabilities and expertise to examine systematically the role and impact of technology as a tool in fostering student achievement. There are also personnel within the HTCTU who have interests in documenting more fully the impact of assistive/instructional technology on student outcomes.

Recommendation: The HTCTU could assume a lead and/or major role in data collection and focus of efforts around new accreditation standards, technology access requirements, and outcome-based learning. With appropriate guidance from research personnel, the HTCTU could: 1) design a study to examine instructional technology applications and their impact on educational outcomes, 2) gather the data needed to draw conclusions related to the value and need for instructional technology in fostering achievement for all students; and 3) prepare recommendations that could be transmitted to the Western Association of Schools and Colleges, the Accrediting Commission for Community and Junior Colleges for inclusion in future standards.

3. Observation Supporting Recommendation: At present, only one workstation within the HTCTU instructional laboratory is located at a height-adjustable table providing good access for persons in wheelchairs. In addition, power strips and electrical cords on the floors beneath workstations can be barriers to full access to the workstations, as well as offer opportunities for training interruptions if participants or service animals accidentally trip power switches.

Recommendation: Continue forward with planned renovations to the instructional laboratory, with particular attention to creating adjustable workstations for all learners, increasing the number of 21-inch monitors, and clearing under-station areas of cord and power strips, reducing access barriers and minimizing the likelihood of training interruptions.

4. Observation Supporting Recommendation: There is a fairly high degree of reliance on fiscal staff of the Foothill-DeAnza Community College District Office in monitoring financial operations and status of the HTCTU. This is due, in part, to the relatively short tenure of the HTCTU's administrative assistant in his current position. Because the HTCTU account is quite active, effective in-house monitoring is very important.

Recommendation: Continue to provide opportunities for staff development for the administrative assistant. Particular attention to skill acquisition with the District's FRS and BRIO systems is recommended to ensure effective exchange of timely and accurate information between the Foothill-DeAnza Community College District Office and the HTCTU. An excellent foundation has been established for effective self-monitoring, and continued staff development in this area will ensure that the process continues to work effectively.

Technology Deployment

General Observations

The work conducted by the HTCTU in promoting effective use of instructional technology throughout the CCCS can only be described as outstanding. During the review, the Review Team members observed very dedicated, capable, and effective staff involved in high quality service delivery that clearly was appropriate to the needs of the field. In addition to talking freely about what they believe they do well for the field, the HTCTU staff were candid and objective about problem areas with regard to HTCTU operations and about things that they believed could be done better to meet the needs of the field, including changes in the HTCTU Website to improve accessibility and usability.

The display of knowledge about instructional technologies and their use by persons with various disabilities was impressive, as was the skill of training staff in providing instruction regarding use of such technologies in learning activities. The management, training, and support staffs of the HTCTU all were clearly committed to providing the highest quality training, technical assistance, and informational support possible to the field. Long hours spent becoming familiar with technologies and preparing for training and information dissemination about those technologies were evident. There was also a clear commitment to provide the most relevant and complete information about instructional technologies to trainees and others in the field.

With regard to staying abreast of new developments in instructional technology, it was clear that systematic strategies were in place for securing information about new technologies, obtaining as much information on functionality and limitations of such technologies as could be secured, and arranging for receipt of items for testing and appraisal of suitability in educational settings. Although some problems were acknowledged in securing products for testing in a timely fashion, it was obvious that the problems were not due to lack of effort on behalf of HTCTU staff, but were rather

due to vendor relation issues and not having sufficient resources to serve as fully participating beta-test sites for many new products as they became available for pre-market testing.

Overall, HTCTU staff knowledge about instructional technology was impressive. It was clear that there was a strong commitment to doing the job thoroughly and well, and the HTCTU appears to be doing an excellent job of promoting effective use of current and appropriate technologies within the CCCS.

Commendations

- Staff are knowledgeable and helpful about all aspects of assistive computer technologies.
- HTCTU staff exhibit real enthusiasm for the work that they do and for providing the highest quality technical services to the people and programs that they serve.
- The interactive styles of training staff are appropriate to the needs of trainees, and encourage active learning and participation in training activities.
- Staff provide valuable assistance to colleges on Section 508.
- Staff responses to colleges on technical assistance issues are timely and valuable.
- Workstations in the training lab all well equipped with current and appropriate assistive computer technologies.
- Staff have the ability to keep abreast of rapid developments in the field and develop technical assistance services to meet the issues through various online and print subscription services and through participation in technology-focused conferences, trade shows, and other activities.
- Staff have excellent knowledge of specialized software used throughout the state for accommodations and access, as well as how these programs interact with standard informational and instructional hardware and software.
- Staff interact effectively and appropriately with product developers and vendors to obtain timely information on new products and services and determine how such products and services might benefit CCCS institutions.
- Product reviews are thorough, timely, and readily available.
- The Listserv provides an excellent venue for sharing expertise and information.
- Participant reviews of training provided on various technologies by HTCTU staff are overwhelmingly positive, reflecting high levels of knowledge of technology products and their applications, as well as high levels of trainee satisfaction with the instructional styles and capabilities of HTCTU training staff.
- Responses to the system-wide survey reflected overwhelmingly positive views of HTCTU staff knowledge of instructional technologies and its applications in promoting effective learning by students with different types of disabilities.

Compliance Issues

No compliance issues were noted with regard to technology deployment by the HTCTU. Information gathered through the review and associated activities suggest that the HTCTU is in full compliance with terms of the RFA and the grant agreement executed with the Chancellor's Office as regards technology-related services.

Recommendations

1. Observation Supporting Recommendation: The HTCTU Website, while fully accessible under the Web Content Accessibility Guidelines,  could provide more information for visitors to the site and could be used as a resource for related information and materials. In addition, access to some features of the Website could be improved through re-design.

Recommendation: Updating the HTCTU website should be a priority. A “new and improved” Website should provide good contact information, maps, Braille resources, and consideration of users with other disabilities. Some of the improvements that might be made in a reconfigured Website include visible “skip to” links, use of scalable fonts, and “cleaner” design, making negotiation of the site easier for all users. It is worth mentioning that, at the time of the review visit, HTCTU staff were actively involved in a major Website redesign effort, and that careful attention was being paid to access by all potential users. A number of design options were discussed openly with the technical experts on the review team and approaches for dealing with different features considered. As the work progresses, HTCTU staff are strongly encouraged to engage people from the field in the planning and review process and to complete usability testing before launch of the new Website to ensure the best Web product for the field.

2. Observation Supporting Recommendation: As stated above, it is difficult to find HTCTU contact information or information on other aspects of HTCTU activities. As the HTCTU Website is currently configured, it is not easy to determine how to contact specific individuals on targeted issues.

Recommendation: Although the Website and listserv represent excellent and efficient tools for communicating with the field, the HTCTU's toll-free number

³ Cutler, E. (2002) Web Accessibility Review of selected HTCTU web pages. The Galvin Group, Tucson, AZ

needs to be more prominently featured on informational materials. In addition, consideration needs to be given to the way in which listserv information is managed. Presently, much time and effort is devoted to responding to e-mail inquiries and messages about the wide range of services and access via the toll-free number. The HTCTU is encouraged to look at other ways to use technology to reduce staff time spent replying to e-mails, including more extensive use of Frequently Asked Questions (FAQ) features on the Website and other tools that might automate responses to questions raised by more than one person.

3. Observation Supporting Recommendation: The HTCTU has expressed a desire to preview and/or test technology products immediately prior to market introduction. This would allow HTCTU staff to become familiar with new products prior to inquiries from colleges that may be considering purchase of the technologies. To date, however, they have had limited opportunities in this area. Although they have done an excellent job of contacting and networking with vendors, they have not had success in receiving products from vendors prior to their availability in the market place. This is due, in part, to the fact that technology vendors tend to provide final product releases to members of their beta test teams, rather than maintaining separate lists for this purpose. The HTCTU, however, does not have sufficient staff and resources to engage in full-scale product beta testing.

Recommendation: The HTCTU should explore opportunities for modified beta testing of various technology products. They should sign on with vendors as participants in beta testing programs, stipulating however that their testing will be limited, and that their primary interest is in evaluating the final release. Most vendors will likely be supportive of this arrangement, but if reluctant, vendors could likely be persuaded by a summary of the potential value of such participation (e.g., numbers of colleges and potential users in CCCS, potential economic benefit based on projected pricing levels).

Responsiveness to the Field

General Observations

As the prior discussions of operational compliance and technology deployment suggested, all indications are that the HTCTU has been doing an outstanding job of responding to the needs of DSP&S units and other users of its services throughout the California Community College System. As noted previously, the HTCTU regularly

carries out needs assessment activities to gauge issues and needs of various constituencies within the CCCS as they pertain to assistive technologies. The HTCTU also engages in regular outreach to the field through both live visits to regional training centers and to individual campuses, as well as through effective use of e-mail and telephone communication. There is a genuine commitment on the part of HTCTU staff to be responsive to the field, and this commitment is reflected in the time and effort that staff devote to their jobs, often requiring significantly more than a 40-hour work week to screen and respond to constituent communications, plan and deliver trainings, and stay abreast of emerging technology developments.

The commitment to being responsive to the field is evident not only in the major activities of the Center (e.g., conducting formal needs assessment), but also in attention to details related to training and technical assistance (e.g., awareness of the problems caused by power strips and electrical cords when service animals used by trainees are under tables, seeking better ways of dealing with high volume e-mail communications so that responses are timely). The commitment is also evident in the HTCTU's willingness to assume responsibilities that go beyond its required scope of work (e.g., assuming a lead role in examining the impact of technology services on instructional outcomes).

The HTCTU has endeavored to be responsive to the needs of the California Community College System and the students who are served by the system. There was ample evidence of this in the data gathered prior to and during the review and in the exchanges between the review team and the personnel of the HTCTU.

Commendations

- There are multiple systems (e.g., e-mail, listservs, toll-free telephone service, TTY, Fax) in place to foster effective two-way communication between the HTCTU staff and CCCS personnel throughout the State.
- Data from the field are managed in a systematic fashion (e.g., analyzed appropriately, summarized thematically) and used effectively to support planning and implementation efforts.
- Program planning is based on information provided through various field-based data collection activities.
- Different methods of dealing with issues raised by people in the field are considered, as evidenced by an array of programmatic approaches that were discussed.
- Training personnel are cognizant of the needs of individual training participants and actively adjust their training efforts to accommodate different styles and

paces of learning that are often encountered in group training activities, providing individualized attention to participants who may require some extra support to realize specific learning objectives.

- Training handbooks, guides, and other materials are well-designed and very useful in support of HTCTU efforts.
- Information, training materials, and other HTCTU products are always made available in alternate formats, with attention to access by any interested party.
- Very careful attention is being given to re-design of the HTCTU Website with the goal of providing optimal access by any user and making negotiation of the Website as easy as possible for anyone using it.
- The staff are committed to staying informed of technologies and relevant issues and go out of their way to keep abreast of rapid developments in the field, learn of new ideas and challenges, and provide leadership in the field.
- The HTCTU staff are very open to consideration of different views and approaches, enhancing the likelihood that positive innovation will be adopted in the conduct of the HTCTU's work.
- A high degree of team effort and organization is readily apparent in the preparation and presentation of training workshops, technical assistance, and other HTCTU activities.

Compliance Issues

No compliance issues were noted with regard to responsiveness to the field. The HTCTU is currently providing the full range of services and support that was specified in the request for applications and in the work agreement executed between the HTCTU and the Chancellor's Office.

Recommendations

1. Observation Supporting Recommendation: There is a need to deliver more college-based training that helps HTC faculty and staff understand how to use technologies in addressing the needs of students with specific types of disabilities and specific learning needs, not just simply "This is how the product works" kind of training. Related to this, trainees also need to know how to assess a student's needs for assistive computer technologies, as well as his or her abilities to use the technologies appropriately. In conjunction with such efforts, more deliberate outreach is needed, with broader dissemination of information about training and other HTCTU efforts and outcomes to the field.

Recommendation: As stated earlier in this report, the staff of the HTCTU provides excellent service to the California Community College System. In many ways, their hard work, enthusiasm and willingness to respond to all questions has led the field to expect more. In the current fiscal climate it would be imprudent to recommend any expansion of services however, the HTCTU may wish to explore other creative methods of providing instruction to HTC faculty. The HTCTU has been utilizing the services of one contractor who provides more disability specific training on technology use. It is suggested that the HTCTU expand opportunities for more involvement of qualified people in the field who might provide this type of training. The HTCTU might wish to explore with High Tech Center and/or Alternate Media Specialists stratagems for providing training more specific to the needs of individual students. Any such training should be conducted with awareness of the appropriate roles faculty and staff have in assessing student capabilities and the influence of disability on technology use. With more field support, trainings might be extended to two-days, providing opportunities to explore how technology solutions can be applied in addressing the needs of students with specific learning or disability issues. Consideration might be given to “hybrid-type” training formats in which a portion of training is conducted at the HTCTU, with a follow-up offering of some type provided at a college campus with either on-site support of HTCTU staff or through teleconferencing and on-site support from a local “training associate” who had been prepared for the role by HTCTU staff. The HTCTU is uniquely positioned to develop and use distance-learning technologies in accomplishing its training and technical assistance missions. The HTCTU staff, most of whom are fairly new to their roles and have been getting integrated into their positions over the last several months, should continue exploring innovative approaches to providing training and technical assistance using instructional technologies, field personnel, and other strategies that foster effective diffusion of technology solutions to instructional problems.

2. Observation Supporting Recommendation: Two issues raised with some frequency by respondents to the Statewide survey relative to acceptance into HTCTU training programs: 1) registration for programs filling up too quickly, precluding registration by people who do not respond to the notification immediately; and 2) relatively short notice regarding acceptance into a program, making it difficult to do early planning and benefit from reduced airfare savings.

Recommendation: One solution to the problem might involve increasing the number of training stations within the existing training laboratory and hiring hourly faculty to assist with instruction and/or supervision of learning

applications by participants. In addition, more consideration should be given to the class registration process to determine if there is an acceptable alternative to the current system. With the obvious popularity of HTCTU offerings, it should be possible to identify fairly quickly the offerings that are going to have sufficient attendance to warrant their delivery. In such cases, notification of attendees should be done as early as possible to provide ample time for making travel and work coverage arrangements. Because cancellations occur on short notice, creating planning difficulties for registrants added at the last minute, the HTCTU might consider instituting a requirement of a two-week cancellation deadline and begin to notify waiting list registrants of their priority ranking on the wait list. Confirmation letters notifying individuals who are registered for classes could also be modified to advise participants that waiting lists are typically held for classes and to seek their assistance in canceling their registration as soon as possible when they are unable to attend.

3. Observation Supporting Recommendation: To date, there has been little effort to stratify training offerings based on the knowledge and expertise of trainees. That is, most trainings are functionally focused (i.e., “learn to use this software”) rather than competency focused (i.e., “advance your skill level from marginal to proficient”). The current approach, while offering greater flexibility in selecting program attendees, does not always serve people at either end of the competency spectrum well. Beginners may view a training as too advanced or accelerated for them to benefit, while participants with fairly well developed skills perceive that they are not getting what they need to move to the next level of effectiveness in using a specific instructional technology.

Recommendation: Consider stratifying some of the instructional offerings, providing “beginner,” “intermediate,” and/or “advanced” levels of training, with specific descriptors of competency at each level provided to help potential participants gauge their own capabilities in determining which level is appropriate for them. This approach might be tested with one or two of the more popular content subjects prior to adopting it on a broader basis.

4. Observation Supporting Recommendation: A challenge for HTCTU staff is to remain current with rapidly advancing developments in informational and instructional technology. Although, the staff are clearly very well informed at present, they are challenged to keep up with rapidly advancing technology developments while still fulfilling their job obligations.

Recommendation: Continue implementation of a professional development plan for the whole HTCTU team. This plan should address knowledge and skill acquisition in priority areas (e.g., descriptive video, captioning techniques, and distance learning). It should also include strategies for exploring how best to apply specific technologies in defined learning situations, such as those typically encountered in High Tech Centers (HTCs) at colleges around the State. In addition, newer or more recently hired staff need to be actively engaged in training activities in order to develop presentation skills and enhance self confidence as effective trainers.

5. Observation Supporting Recommendation: Communication with the field is somewhat problematic owing to the high volume of information exchanged. Of particular concern was the large and growing number of e-mail communications received by the HTCTU staff. A good portion of every day is spent responding to e-mails.

Recommendation: Consider one or more approaches for organizing e-mails in ways that make the communication more manageable. For example, create an e-mail inquiry button just for training questions that could be reviewed by a support staff person and then triaged to the appropriate training staff person, if the answer required it. Many questions are purely informational (e.g., When is the next JAWS training scheduled? How do I sign up for training on the Tiger Embosser?). Also, HTCTU could create An FAQ section on the Website providing quick answers to a number of questions commonly asked (e.g., Will JAWS operate on a Mac?). Other innovative approaches to facilitating communication might involve creating a virtual suggestion box (VSB) on the Website in which people could offer ideas about things the HTCTU might do to better serve them and the field. The VSB, with some guidelines about entering suggestions (e.g., “Provide specific suggestions, rather than vague ideas, such as ‘Offer more trainings.’”). Periodically, the VSB could be “emptied” and the suggestions organized thematically and shared with the field, along with any thoughts from HTCTU staff about its responses to suggestions.

Required Follow-up with Chancellor's Office

The Chancellor's Office has produced this report in accordance with laws and regulations of the United States of America and the State of California regarding equal access to and treatment of persons with disabilities in public programs and facilities. In order to satisfy its requirements for oversight of programs and services operated under the auspices of California's tax-supported community college systems, the Chancellor's Office of the California Community Colleges requires that the HTCTU produce a written response to the Chancellor's Office within 90 days of receipt of this report. The response should include the following three items:

1. A brief description of the Center's plan for resolving each compliance issue identified in the report. This is not a requirement for this review as there were no compliance issues identified.
2. An estimate of the date by which the issue will be resolved in a manner that ensures compliance with State and Federal laws and regulations. This is not an issue for this review, since no compliance issues were identified.
3. An indication whether or not the Center plans to act on the other recommendations included in the report by identifying specific recommendations and the nature of planned actions.

In the event that a compliance issue has been inappropriately or inaccurately identified through the review process, the Center should notify the Chancellor's Office, Coordinator of Disabled Students Programs and Services in writing concerning the nature of the inappropriate or inaccurate portion of the report. This notification should indicate the actual status or nature of the program component or issue identified as non-compliant. The Chancellor's Office reserves the right to schedule an on-site follow-up review of the Center to determine if compliance issues have been or are being resolved in an appropriate and timely fashion.

Closing Remarks

The impression of the entire Review Team was that the HTCTU is doing an outstanding job of addressing the needs of the California Community College System with regard to effective applications of instructional technologies in ensuring access by all students to high quality learning experiences. The capabilities, dedication, and enthusiasm of the HTCTU staff for their roles were very apparent, and the benefit that the CCCS derives from the work done through the HTCTU is substantial.