

PALO VERDE COMMUNITY COLLEGE

INFORMATION TECHNOLOGY

PROGRAM REVIEW

2011

EXECUTIVE SUMMARY

INFORMATION TECHNOLOGY

1. Program Strengths
 - a. Maintains complex technologies with small staff
2. Program Weakness
 - a. Need for computer replacement plan and procedure
 - b. Need for updated technology plan
 - c. Need better integration of functions with Title III
3. Recommendations for Program Improvement
 - a. Develop technology plan that includes equipment replacement plan
 - b. Work on better integration with Title III
4. Committee Determination

Palo Verde Community College District
Information Technology Program Review
2011

1. Support of College Mission

A. Summarize the program in terms of key functions and responsibilities:

The Information Technology (IT) department deploys, maintains and supports the infrastructure providing information technology and services throughout the district. We support multiple locations in Blythe and Needles as well as in an online modality.

B. Describe how the program supports the overall mission of the College as adopted by the Board of Trustees.

The IT department supports the overall mission by maintaining the phone systems, voicemail, servers, Internet access, network/information security, email access for faculty/staff, Enterprise Resource Planning (ERP), database systems, disaster recovery, reporting systems, spam/web filtering, remote access, staff/faculty desktops, classroom computers/instructional technology, internal Instant messaging/video chat systems and videoconferencing systems.

C. Describe in qualitative and quantitative terms, the population served by the program.

We maintain approximately 470 desktops, 90 servers, 150+ phones and 100+ voicemail accounts. Computers/telephones are located across campus in faculty offices, staff offices, 30 classrooms, Library, and the Learning Skills Center.

2. Accomplishments/Progress on Previous Goals

A. Describe progress in achieving goals outlined in the previous program review, including evidence documenting such achievements.

1. ERP system recommendation this year (2006).

The district went through a comprehensive request for proposal process for a new ERP system with guidance from Strata Information Group. Datatel Colleague and SunGard Banner were selected as meeting the RFP requirements. The Datatel proposal was selected in July 2007.

2. ERP deployment over next several years.

The primary implementation of the Datatel Colleague ERP system has taken place over the last three years. Initial integration of the ERP/registration systems with other systems such as the Sakai learning management system is complete. However, some implementation and integration efforts remain ongoing (document imaging, class scheduling, analytics and reporting, etc).

3. Continue to support existing MIS/ERP systems.

Existing ERP platforms were supported during the transition to Datatel Colleague Jenzabar EX, PowerFAIDS, Ad Astra, reporting systems). TutorTrack is also interfaced Colleague. The integration with SARS, automated assessment score import process and conversion from Astra to Schedule25 are still ongoing.

4. Expand current infrastructure to support coming projects such as online student services and expanded online course delivery.

The IT Department directly supports instructional technology such as projectors, multi-media devices, document cameras, computer labs, instructional software, lab usage tracking, smart boards, videoconferencing systems, etc. IT developed a data exchange mechanism to send student and course registration data automatically from Datatel Colleague to the Bridge (Sakai LMS) to eliminate hand entry. A new firewall was implemented in order to further secure district networks and ease configuration of connectivity. Extreme bandwidth shortages at the main campus were resolved by upgrading to a DS3 to enable faster Internet and more simultaneous video connections.

5. Improving our communications capabilities between the Blythe Main Campus, Spring Street, Needles and the Child Development Center.

The bandwidth shortage issue at the main campus was resolved by upgrading from the circuit system and now delivered via microwave connection. The lack of fiber availability necessitated the use of a microwave transport for the last 6 miles to campus. It took two years to coordinate activities between Cenic and the multiple telecommunications carriers involved as well as work through the associated red-tape in order to complete the circuit built out. Microsoft Exchange was deployed to enhance internal email and calendaring capabilities. Mobile access to exchange is available for employees if they have a supported smartphone. Office Communicator was deployed to enable internal instant messaging, screen sharing and webcam communication between desktops in all three primary locations.

6. Security and bandwidth management infrastructure.

A new firewall was deployed at the main campus in order to secure the internal network and ease configuration of required communications connectivity (videoconferencing, Office Communicator, web access to Exchange, remote access by vendors, static VPN between Blythe and Needles campuses, interface between Datatel Colleague and rSmart data center). The bandwidth available to the main campus was upgraded. Traffic shaping appliances were setup to enable equitable bandwidth sharing.

7. Continued improvement of our technical support process.

The IT department supports faculty, staff and increasingly students at multiple physical locations as well as online context. IT has coordinated with the Title III staff on the implementation and support of the Saki learning system.

8. Reduction of time spent on system and network administration through automation.

IT has aggressively pursued system automation through a number of software tools with emphasis on upgrading the Microsoft System Center. These tools enable timely system event notification and improved management/response capabilities. This has increased our ability to detect and respond to error conditions before they turn into system downtime.

9. Complete our Disaster Recovery Planning.

Migration to Microsoft Data Protection Manager 2007 to perform data backup and restore capabilities was completed during the ERP deployments. This has provided better protection of server and data assets with more rapid ability to restore. We are currently upgrading to version 2010. Server workloads virtualization has been ongoing along with standardizing on Microsoft Hyper-V as the virtualization platform. This has enabled higher server utilization, less disruptive hardware maintenance windows and improved server availability and recovery options.

10. Technology Training Plan for staff.

The majority of training efforts revolved around the training required for IT and staff for the ERP deployment. Substantial training and consulting engagements occurred with most administrative, instructional and student services departments. IT coordinated or attended the majority of these sessions. Updates were also given to staff and faculty at large during campus events regarding campus impacts. Training was given on an as requested basis. However, a formal Technology Training Plan still needs to be developed.

11. Aggressively pursue training and staff development opportunities to keep pace with changing technology.

During the last three years IT has engaged in substantial training with regard to Datatel and associated ERP systems. IT staff attended training at the Microsoft Management Summit on topics such as System Center and Data Protection Manager. IT staff engages in webinars on demand from resources such as Microsoft Technet as well as a subscription we maintain through CBT Nuggets.

B. Explain modification of goals outlined in the previous program review, including evidence documenting such modifications.

1. ERP deployment over next several years.

Degree Audit: Implementation of the Degree Audit model of Datatel Colleague was started after the initial system implementation was complete. This will provide counseling staff with digital degree audit tools to use when counseling and it targeted for completion in 2011. The web-accessible student component of degree audit will be added to pvc-services.paloverd.edu in 2012.

2. Expand current infrastructure to support coming projects such as online student services and expanded online course delivery.

The delivery of paloverde.edu issued student email addresses is entering a beta testing period. This was a much requested feature by faculty and will enable more standardized email communication with students. These email accounts are being provided via integration with Microsoft's Live Cloud services and will also provide other benefits such as online file storage.

Additional infrastructure enhancements will likely be required due to the district's goals of expanding the number of online courses in existence and an anticipated need for video streaming utilized in online courses. The district is currently under contract with rSmart to maintain the Sakai system and provide hosting in an off-site data center. A yearly evaluation will need to be performed as to the value of continuing this contract vs. the expense of self-hosting and maintaining

3. Complete our Disaster Recovery Planning.

Offsite backup of a critical subset of data was setup through an online backup provider. However, now that conversion to DPM is complete offsite back up data needs to be integrated so it will happen automatically. Locate an affordable provider and integrate with DPM.

4. Technology Training Plan for staff.

Training needs will always be ongoing. However, the setup activities of the Datatel/ERP, reporting systems and online course delivery systems demonstrated additional training needs especially for the Colleague system, Business Objects, Sakai and SharePoint. The

goals of the development of a formal staff technology training plan remains outstanding and must take into account these newly identified needs.

5. Aggressively pursue training and staff development opportunities to keep pace with changing technology

Technical Training needs will remain ongoing, especially for IT. The extremely rapid rate of change, ongoing ERP deployments and expanded online activities create skills gaps that must be addressed. The emphasis on an increased number of online courses, the integration activities specified in the Web Presence Plan and enhanced reporting needs will require training opportunities in a number of fields: database skills, business intelligence, SharePoint 2010, Sakai infrastructure, etc.

C. Describe specific, documented accomplishments that support and facilitate the achievement and assessment of student learning outcomes, including measures employed to evaluate program effectiveness in achieving such outcomes.

Online admissions and registration have now been available for three terms. While this represented a large change in process for both students and staff the results have generally been accepted as positive. The beginning of the current term also experienced a significant drop in the number of technical support requests that were received with regard to admissions and registration across all contact points (result compiled through multiple registration debrief sessions coordinated through ERP Core committee).

The Colleague implementation moved the Admissions & Records department, Administrative Services and Financial Aid onto the same system with a shared database. This has provided a higher degree of data accuracy as well as greatly reducing data entry among multiple systems and improving accuracy. In addition, more data is now made available to the student via login to pvc-services than by mailing paper documents. For example, the majority of Financial Aid documents are not distributed to the student online.

We now have a useable database of current email addresses for enrolled students due to the online registration process. The Datatel Communication Management module, pvc-services.paloverde.edu and The Bridge all contain functionality to send email communication to groups of students. While additional work remains to be done this has increased the level of electronic communications that are utilized for student communication.

The implementation of Office Communicator for use by college staff has enabled easy webcam-based video conference and screen sharing. This is currently being utilized to provide remote counseling services to student located in Needles.

3. New Goals

A. **Outline new goals including an explanation how the program supports the achievement of student learning outcomes, and state timelines for completion, measures for evaluating achievement of such goals and a process for implementing improvements.**

1. Develop a Web Presence Plan (WPP).

Draft a WPP to establish a timeline for and guide the redesign and integration of current and planned web sites (public website, registration/degree audit, Sakai learning management system, planned student email, SharePoint collaboration tools, internal communication systems, student portal, etc.). As these resources provide the public face of the college, wrap many of the ERP and online efforts of the last 3 years into an integrated whole and directly impact how we interact with students this initiative of the highest priority.

2. Retrofit of aging core network infrastructure.

Ten year old core networking switches and call management system (PBX) on main campus are at end of life and vendor support. Seek cost effective support options for keeping operational and upgrade data/voice/voicemail systems as budget permits. Pursue unified communication architecture to combine voice, messaging, mobile and video capabilities into a unified package. This goal is of the second highest priority and needs to be substantively addressed by the end of 2011.

3. Formalize a plan for sustainable computer and equipment replacement.

A model for funding the replacement of staff, faculty and classroom equipment on an ongoing cycle needs to be developed in order to ensure adequate modern information technology resources are available for accomplishing district objectives. The opportunities the district has for acquiring equipment in conjunction with building construction are likely to diminish. This goal will take on increased importance as time passes. While development of this plan should be ongoing, it is targeted completed after the Fine and Performing Arts center becomes occupied and the provided equipment assessed.

4. Improved Needles Internet bandwidth and videoconferencing capability.

Needles campus is still served by multiple separate DSL connections. Separate connections need to be combined into a single higher speed connection to improve Internet bandwidth and expand videoconferencing capabilities. The priority of this will depend on how much the video usage at Needles increases. The timeline to achieve this goal will depend upon the connectivity options that become available now that Frontier Communications is serving both the Blythe and Needles area as well as the associated cost.

5. Build out Reporting/Analytics/Research capabilities.

Additional operation reports are needed by some departments above what was provided during initial Datatel implementation. Coordination with department representatives and institutional researcher to increase use of available data for decision making processes. Develop dashboards to provide executive level reporting. This goal involves the coordination of multiple departments as well as implementation and integration of complex database and reporting components. It is likely that additional department resources or consultants will be required in order to make substantial progress on this goal. Due to the complexity of this goal it is anticipated that substantial, demonstrable progress may not be until 2013.

4. **Personnel Summary**

A. Provide an organizational chart of the program, showing personnel coverage of key functions and responsibilities.

See chart in on page 14.

B. Are current management and staff adequate to perform functions and responsibilities satisfactorily and to achieve program goals? Explain.

IT department has 5 full-time and 2 part-time positions in the Blythe area and one half-time position in Needles. Due to budgetary constraints student worker positions are extremely limited. Overall, staffing levels have remained essentially unchanged over the last 5 years despite an evolving role and an expanding scope of responsibilities. Additional personnel are going to be required to maintain support levels.

C. Describe organizational changes that will improve program performance, provide timelines for the achievement of such changes and describe measures that will assess the effectiveness of such changes.

The impact of the Fine and Performing Arts Center upon IT is currently unknown. Addressing these issues will be facilitated by the development of the IT Staffing Plan as funding allows.

5. Staff Development

A. Describe specific professional development activities in which program members participate, and explain how such activities benefit or enhance the program and support and facilitate student learning outcomes.

IT staff have attended a huge amount of training over the last 3+ years with regard to the ERP/Datatel and associated systems. IT takes advantage of training workshops when available as well as utilizing an array of webinars and computer based training.

IT has also been directly involved in, facilitated or monitored the majority of Datatel implementation training/consulting sessions for other departments. We provide content for Flex day or other staff events as requested.

Continued access to training materials and opportunities will be critical for maintaining effective IT operations. IT staff members are encouraged to take advantage of opportunities as well as formalized skills with certification or coursework where appropriate.

The staff continues to strive to support student learning outcomes by being accessible whether it be assisting with computer access, answering questions, or keeping the computers running in the classrooms. They also assist classroom instruction via projectors, smart boards, etc. IT has collaborated with the Title III efforts to setup online instruction via the Bridge (Sakai LMS) and will continue to support these efforts. Implementation of the Datatel Colleague system has enabled online admissions and course registration capability. Early beta testing of student email accounts and online file storage has begun in an effort to expand the online tools available to students by the district.

B. Describe areas of unmet professional development needs among personnel in this program, if applicable, and outline plans to address those needs.

Development of the IT Staffing Plan is to capture current and expected cross departmental technology training and support needs. A task force has been established to draft the plan. However, some initial data gathering activities are underway which includes surveys and interviews distributed to all groups including students on campus.

Need to identify key areas where redundancy is critical and ensure that cross training occurs.

6. Facilities and Equipment

A. Are current facilities, such as classrooms, office and equipment, adequate to support the program? Explain.

Additional space is needed by the IT department. Equipment is adequate to meet the needs of the campus.

B. Is available dedicated space adequate to support the program? Explain.

Currently, the department shares office space in the Library. The Help Desk is located in the Learning Skills area. Space is very limited in the control room. There is a huge need for more IT space, but will continue to make due until changes can be made.

C. Is available equipment adequate to support the program? Explain.

Available equipment is adequate at the current time to support current activities and projects.

D. Describe plans for future changes in support facilities or equipment.

1. Additional servers and networking equipment is needed in order to upgrade old network core and enhance communication capabilities.
2. Increasing the number of courses offered online or hosting Sakai ourselves rather than through rSmart will also require additional servers.
3. In addition, maintaining funding to replace computers and equipment with current models on an ongoing basis is important. This will ensure technology available for staff is adequate and that is provided in the classroom remains relevant.

7. Financial Resources

Provide a financial report showing, for each year of the preceding 3 years, budgeted vs. actual expenditures for each of these line items, at a minimum:

Budgeted vs. actual expenditures for previous three years:

	2009-2010		2008-2009		2007-2008	
	Budget	Actual	Budget	Actual	Budget	Actual
Salaries	\$ 412,720	\$ 424,521	\$ 381,220	\$ 389,318	\$ 372,009	\$ 342,809
Benefits	\$ 114,633	\$ 155,405	\$ 128,934	\$ 137,169	\$ 105,903	\$ 107,127
Supplies	\$ 743	\$ 711	\$ 1,621	\$ 2,612	\$ 15,750	\$ 7,997
Contracts	\$ 106,134	\$ 105,584	\$ 156,907	\$ 78,837	\$ 243,800	\$ 215,498
Capital	\$ 102,660	\$ 75,867	\$ 27,000	\$ 10,045	\$ 123,100	\$ 69,441
Total	\$ 736,892	\$ 762,089	\$ 695,682	\$ 617,981	\$ 860,562	\$ 742,872

A sustainable plan for ongoing replacement of desktop, server, equipment and instructional technology needs to be developed. When the Datatel contract was negotiated in 2007,

maintenance for the core items was pre-paid for a 5 year period. This will need to be budgeted for moving forward. Also, technical acquisition and expansion has a cost beyond the initial purchase (ongoing costs to cover support manpower, maintenance contracts, upgrades, etc.). Budget to cover these costs must be maintained in order to continue to receive benefit from these investments in technology.

8. Strengths and Challenges

A. List and comment on major strengths of the program

1. Maintains complex technologies with small staff.
2. The department demonstrates a willingness to go the extra mile to keep infrastructure and IT services running smoothly.
3. Staying abreast of technical change has been established as a priority throughout the department and staff has demonstrated a willingness to migrate forward rather than show resistance to change.
4. We support the entire gamut of technology from cabling to database reporting. Out of necessity we work as IT generalists but have managed to build a good degree of competency in the areas we support.

B. List and comment on the major weaknesses of the program

1. Need for updated Technology Plan.
2. Need for computer replacement plan and procedures.
3. Phenomenal rate of technology change, expanding scope of IT responsibilities and the ongoing ERP/Datatel implementations has stressed departmental resources.
4. Increased digital interaction between the district/faculty and the student body has created more instances where technical support is needed in a physical classroom as well as over the Internet.
5. Small staff size and workload make cross-training in IT specialties challenging.
6. IT is increasingly placed in a new role of facilitation rather than purely technical duties due to the increase integration of technology into the operation of all district departments and the coordination required between departments due to working on a shared ERP system.

C. List recommendations for improving and correcting identified weaknesses.

1. Continued training for changes in IT industry, new software versions and Datatel/ERP topics will be necessary to keep pace with the rate of technology change and increased usage of ERP systems.
2. The means by which the district provides technical support will need to evolve in order to handle online students, increased hours of use for online courses and different instructional delivery methods. Coordinate these changes through collaborative discussions with the offices and constituencies served.
3. Cross training and redundancy can improve by creating detailed process documentation and discussing issues on an ongoing basis through forums such as IT department meetings, ERP Core committee, Distance Learning committee, College Council, etc.
4. IT should continue to attend the ERP Core and Distance Learning committees. Active participation and discussion in these settings help create a shared understanding between IT and other departments. Increased understanding of the challenges faced by other departments will result in the ability to provide better technical assistance.
5. Develop technology plan that includes equipment replacement plan.

Palo Verde Community College
Information Technology Organizational Chart
2011

