

IIIC. Technology Resources

III.C.1.

Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services.

Evidence of Meeting the Standard

In order to ensure that the technology needs of the campus are sufficient to support all functions of the campus, the campus relies upon both the District and the college to identify, provide and maintain the technology infrastructure. At the District level there are several committees that help make decisions about technology services, facilities, hardware, and software to ensure that the needs of the District and campus are being met. These District groups include the District Advisory Groups, Administrative Technology Advisory Group (ATAC), Instructional Technology Advisory Committee (ITAC), and the Distance Learning Task Force (DLTF). The committees' descriptions and purpose can be viewed in the Strategic Technology Plan.

Specifically, for Distance Education the District uses DLTF to advise the Chancellor on issues, policies, and needs of the District and the constituent colleges in the area of technologies needed for teaching via distance education (pg. 28). DE technology solutions are centralized at the District level. District wide discussions take place in the ITAC committee whose membership consists of faculty representatives, instructional technologists, and EVPs from all three campuses.

At the campus level, the institution engages in the annual program planning process so that instructional, student services and business services can request technological resources¹. These needs are evaluated using a rubric developed by the F/TCAP committee², analyzed by the Technology Resource Allocation Work Group (TRAWG), with the guidance of the Technology Master Plan. The Technology Master Plan specifies technology standards, guidelines for evaluating technology requests, the technology refresh plan, and provisions for adaptive technology. After requests have been prioritized, the Vice President of Business Services reviews the recommendations, considers all requests across the campus and presents the final prioritization to the President. Once approved, the result of the program plan request process is posted on the Moorpark College Office of Business Services planning page.

In order to evaluate how effectively the institution meets the technological needs of groups on campus, including those of DE, the institution relies on several measures. Through the program planning process, groups who have identified and received technological requests are asked to explain how the item has been used and what results the program is seeing from the use of the item. In fall 2014, the campus created a Distance Education Advisory Group that reported to the Executive Vice President. This group transitioned to a standing committee effective Fall 2015 in order to have on-going assistance to the DE program. As with all standing committees, the goal is to ensure the membership reflects expertise and inclusion from the campus including faculty, staff, administrators and students. Various surveys are conducted of different constituent groups through Campus Business Services Survey and the District Survey³. The Office of Instructional

¹ **Item #1:** TRAWG 2012-13. TRAWG (Technology Resource Allocation Work Group) 2012-2013 Priority Ranking for Technology Requests **Item #2:** TCAP 3_2013. Minutes for the March 2013 meeting of the F/TCAP committee. See Item #3, last bullet. **Item #3:** TRAWG 2013-14. Rankings from TRAWG. See TRAWG 2012-13 above for more details.

² **Item #11** TRAWG Criteria. The criteria used by TRAWG to prioritize requests.

³ **Item #13:** Business Survey; **#26** A District wide survey of student perceptions is scheduled to be completed in 2015. An employee survey of the work environment is scheduled to be completed in 2015.

Technology collects feedback about campus wide technology from faculty and staff. There is an IT help desk system in which a person can submit a ticket for problems encountered in the use of computer equipment and peripherals, network resources, the telephone system, and audio/visual equipment⁴. Critical and emergency requests have a response time of fifteen minutes. Urgent requests have a response time of an hour. Normal priority requests have a response time of approximately 4 hours and low requests have a 1 day response time. The District continually reviews the DE and portal system statistics to ensure that servers are adequately sized for their role. If servers are being heavily stressed, additional or larger servers will be added.

The District office and Moorpark College have provisions to provide reliability, disaster recovery, privacy, and security to ensure that the technology platform for distance education courses and programs is reliable and sustainable. The current distance learning system in use is Desire2Learn (D2L) and is hosted at the District office. All systems at the District office used to host the Desire2Learn platform have redundant components to provide reliability. Some of those redundant components include multiple front end servers to provide redundancy and scalability. In the event that any one component fails, students and instructors will still be able to access the system. Along with redundant systems, all server data is backup up nightly. Copies of those backups are then electronically sent from the District office datacenter to the disaster recovery site at Moorpark College. There are several measures in place to provide security to the distance learning system. The use of a firewall and an Intrusion Prevention System (IPS) can prevent unauthorized access and prevent the exploitation of vulnerabilities. The firewall and IPS are continuously updated to stay up-to-date and protect against current vulnerabilities and exploits. The faculty, staff, and students that use the Desire2Learn system are authenticated to ensure that the user is authorized to access the system. When users access the Desire2Learn system, data is accessed using secure and encrypted protocols to provide security and privacy.

Since the last accreditation report, various IT projects have been undertaken to meet the needs of management and operational functions, academic programs, teaching and learning, and support services. These include:

- Remote access to Banner (management)⁵
- Lync phone system to provide unified communication (operational)
- Electronic building keys (operational)
- IT Help Desk system (teaching and learning)
- New security camera system in last 5 years (operational)
- New announcement speaker system—including text and email (operational)
- Refresh list/ choice of laptop vs. desktop (operational)
- Upgraded the computers in the Communication building labs (academic programs)
- Upgraded the computers in the Technology building labs (academic programs)
- Photo lab upgraded (academic programs)
- Increase in the number of SMART classroom (teaching and learning)
- MyNav, Degreeworks, OnBase (student support services)
- Upgrade the campus wireless network (teaching and learning)
- Implementation of the MyVCCCD mobile app (student support services)

III.C.2.

The institution continuously plans for, updates and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services.

⁴ **Item #27:** There are several committees that help make decisions about technology services, facilities, hardware, and software. The committees' descriptions and purpose can be viewed in the Strategic Technology Plan on pages 23-27.

⁵ **Item #36:** ATAC meeting held on February 7, 2013, the ATAC committee discussed the issue of remote access to Banner for managers

Evidence of Meeting the Standard

The institution has several methods used to guarantee that the technological infrastructure is maintained and updated so as support its programs and services. The District has set up special accounts for technology refresh. These accounts are funded by the campus for current and future technology needs. The amount set aside is a local decision. The annual IT operational plan will determine the technology refresh budget need for the coming academic year. The District leaves the campus IT needs up to the campus. The program plan template allows faculty, staff and administrators to specify if they have a technology need, summarize data they have to support their request, explain how the request is a short or long term need and describe how it will benefit the program⁶.

In order to assure a robust and secure technical infrastructure, the servers and storage used for distance education are adequately sized to handle the peak traffic that occurs the week prior to the start of the semester as well as the first week of the semester. The organization uses five portal servers that act as the front end for the my.vcccd.edu portal⁷. The current distance learning system in use is Desire2Learn (D2L) and is hosted at the District office. The D2L system is upgraded on a periodic basis to add features and to update security⁸. Each portal server can handle several hundred simultaneous connections to the Desire2Learn system. All systems at the District office used to support Desire2Learn and distance learning have redundant components. In the event that any one component fails, students and instructors will still be able to access the system. Along with redundant systems, all server data is backup up nightly. Copies of those backups are then sent to the disaster recovery site at Moorpark College⁹. There are several measures in place to provide security to the distance learning system. Those measures include a firewall, an Intrusion Prevention System (IPS), and antivirus software. The firewall only allows specified traffic to the Desire2Learn system. This helps prevent unauthorized access. The IPS protects the Desire2Learn system from potential vulnerabilities that hackers might exploit. The antivirus system protects the system from malware and viruses. The firewall, IPS, and antivirus applications are constantly updated. The Desire2Learn system itself has multiple levels of security that control system access¹⁰.

The District and campus IT departments continually update the campus infrastructure. This includes the routers, firewalls, switches, antivirus software, and servers. Critical infrastructure has redundancies to provide a higher degree of reliability¹¹. Faculty, staff and administrators can request specific upgrades/updates to the infrastructure that will help their programs through the program planning process¹².

⁶ **Item #50:** See Program Plans for the following disciplines: Art History (LED projector), Engineering's request for technology, Film Studies received several pieces of equipment that has impacted the classroom; Astronomy's request for telescope which it received; Biology request for better Wi-Fi in labs.

⁷ **item #38:** The following is an example of the number of simultaneous connections from 8:55am on January 13, 2015

⁸ **item #28:** The description of the Distance Learning Task Force can be viewed on page 28 of the VCCCD Strategic Technology Plan.

⁹ **item #38:** The following is an example of the number of simultaneous connections from 8:55am on January 13, 2015

¹⁰ **Item #39:** The D2L system is upgraded on a periodic basis to add features and to update security. On page 1 of the following DLTF meeting notes discusses past upgrade processes.

¹¹ **item #2: TCAP 3_2013.** Minutes for the March 2013 meeting of the F/TCAP committee (See Item #3, last bullet); **Item 4: F_TCAP 3_2014.** Minutes for the March 2014 meeting of the F/TCAP committee. See Item #4. For III.C.1.c see Item #3, first bullet; item 5: F_TCAP 11_2014. Minutes for the November 2014 meeting of the F/TCAP committee. See Item #3, 2nd bullet. For III.C.1.c see Item #3, first bullet.

¹² **item #50:** See Program Plans for the following disciplines: Art History (LED projector), Engineering's request for technology, Film Studies received several pieces of equipment that has impacted the classroom; Astronomy's request for telescope which it received; Biology request for better Wi-Fi in labs.

When it comes to supporting the DE program on campus there are several resources available to students:

- The campus provides over 300 open access computers for students to access their DE courses.
- 140 open access computers in the Open Access Lab, 1st floor of LLR
- 46 open access computers 2nd Floor LLR
- 36 in the Language Lab, 3rd Floor LLR
- 40 open access computers 3rd Floor LLR
- 40 open access computers 1st Floor Fountain Hall
- Computer Lab: 52 hours a week during regular semester; 8 am – 8 pm M-Th and 8 am – 12 pm F
- Language Lab: Whenever personnel from the Division office is available to open the lab and when there is no scheduled class / class activity.
- The District has added several front end servers as the load has increased. This has helped ensure that the DE environment is sized appropriately for the amount of users connected to the DE environment¹³.
- The campus provides a student wireless network that allows students with wireless devices the ability to access the DE environment from nearly anywhere on campus.

District IT distributes the same resources to each campus so as to provide a robust and secure technical infrastructure and maintain an up-to-date, effective platform for its DE program. The District ITAC committee advises the Chancellor on technology planning and priority setting for all technologies used in the teaching/learning process. The ITAC committee advises on changes made to the DE environment¹⁴. District IT makes sure the systems are robust and secure for our needs.

As described in IIIC.1 the institution bases its decision-making on the process outlined in the *Making Decisions* document. This program planning process helps ensure that there is a documented need for requests, that requests are received and used and that have an impact on the program. In this process programs are asked to consider evidence such as SLO assessments, retention and success data and the number of majors to help explain the rationale for equipment and technology¹⁵. Broadly the campus routinely updates its Technology Master Plan to reflect the mission, values and strategic vision of the institution.

III.C.3.

The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security.

Evidence of Meeting the Standard

Moorpark College has converted nearly all computer labs on campus with thin client systems. The thin clients utilize a virtual desktop infrastructure (VDI) environment which allows the campus to quickly upgrade a lab with new software as well as to deploy a new image in the event that a system becomes corrupt or unusable. The management system used to control the VDI environment is called vWorkspace¹⁶. The IT department has described the maintenance of its technological infrastructure and equipment in its Service Level Agreements (SLA)¹⁷ and the process for hiring of staff to maintain the infrastructure¹⁸. All systems at the campus used to

¹³ **item #37:** List of computers available for student use

¹⁴ **Items #6 : ITAC 12_2014.** ITAC (Instructional Technology Advisory Committee) Minutes for December 2014. See items 3 and 8. Item #7: ITAC 4_2014. ITAC Minutes for April 2014. See item #3; **item #38:** Description of server storage size

¹⁵ **Item #10:** Resource Allocation. Resource Allocation 2013_14.pdf. This summarizes the requests that were processed by the F/TCAP Committee

¹⁶ **item #32:** The following is a snapshot of the vWorkspace platform used at Moorpark College.

¹⁷ **item #16:** Link to SLA

¹⁸ **item #49:** MDD-description of Program Plan process. Pgs. 22-24

support the learning management system, email, and the ERP system have redundant components. In the event that any one component fails, students, faculty and staff will still be able to access the systems. Along with redundant systems, all server data is backed up on a nightly basis as discussed in IIIC.2. The campus also uses network monitoring systems to monitor critical network equipment including switches, routers, servers, environmental meters, and firewalls. Those networking monitoring systems include Foglight NMS and HP Intelligent Management Center. The network monitoring systems backup the configurations of the devices that they monitor. The network monitoring systems also send alerts when errors are detected, when devices become unavailable, or when threshold tolerances are exceeded. In order to protect against power grid failures, the District office and Moorpark College datacenters have emergency power in the form of uninterruptable power supplies (UPS) and backup power generators.

III.C.4.

The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.

Evidence of Meeting the Standard

To assess the needs of faculty and staff as it pertains to technology training, the Professional Development Committee (formerly Faculty Development) does surveys every year at Fall Fling asking faculty what workshops they want during Flex Week. These recommendations are then forwarded to the Instructional Technologist. These comments lead to the creation of a variety of workshops regarding technology and DE instruction¹⁹. When the campus migrates to a new program, the District will provide trainings at each campus for such programs (OMNI update, Lync phones). In addition, faculty can request of our Instructional Technologists one-on-one trainings for specific needs. There is an IT help desk for faculty which document when a request was submitted and when the work was completed. IT help desk orders are normally submitted online by email the IT help desk or by calling the IT help desk and they will input the ticket on the caller's behalf.

The institution provides training in the use of technology to faculty, staff and, to a limited extent, students. Recognizing that teaching online is a different challenge, requiring new tools and skillset, the Instructional Technologist schedules trainings for faculty in the distance learning system which are held at the beginning of each fall semester during Flex Week. This training is required of all faculty before teaching an online or hybrid course. In addition, each Flex Week there is at least one day of training is devoted to technology workshops. Training is continued throughout the semester for those seeking to teach DE classes²⁰. The Instructional Technologist also leads training for programs that might be used by faculty, such as Lynda.com. These trainings are part of a series called 'TechEd Breaks'²¹. Attendance at these trainings is tracked and faculty/staff are asked to evaluate the effectiveness of trainings during Flex week²².

While there is no official technology training for students except through credit work, the Open Access Lab (OAL) has student workers that help students with questions related to using computers and applications in the OAL. The library staff offers sessions to students on how to use the library databases. Student workers are available in the OAL from 8am – 8pm Monday through Thursday and from 8am – 12pm on Friday. Recognizing that students need to be comfortable with technology in order to do well in DE classes, there is an online tutorial available 24/7 for students²³. To further assist students beyond the online tutorials, students can call a dedicated DE helpline or submit questions related to accessing their DE classes. The helpline and

¹⁹ **Item #51:** Fall 2013 Flex week materials

²⁰ **Item #56:** Examples of Instructional DE/Tech training

²¹ **Item #55:** Examples of Coffee Break fliers

²² **Item #57:** Examples of Faculty development of attendance to trainings

²³ **Item #54:** Student tutorial and help pages- Available all of the time.

email account are staffed by trained student workers.

III.C.5.

The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.

Evidence of Meeting the Standard

As discussed in IIIC. 2, the institution has the program planning process in place whereby programs can request technology to assist in the teaching and learning process. While faculty best know what is necessary to facilitate teaching, since the requests are vetted through TRAWG and with the Technology Master Plan guiding the long-term vision of technology on campus, the process ensures that those items that are prioritized are appropriate. Through this process student services can also request software and hardware that will help achieve student success and equity.

Every semester faculty and staff must read and accept the District's Computer and Network Use policy after they login to the my.vcccd.edu portal. Faculty and staff must agree to the terms of the acceptable use policy otherwise they are not allowed to access or use the system. When students use personal devices on the campus student wireless network, they must accept the acceptable use policy as well. Failure of the student accepting the acceptable use policy will result in the inability to access the student wireless network.