

Standard Five—Library and Information Resources

Standard 5.A- Purpose and Scope

The primary purpose for library and information resources is to support teaching, learning and if applicable, research in ways consistent with and supportive of the institutions missions and goals. Adequate library and information resources and services at the appropriate level for degrees offered are available to support the intellectual, cultural and technical development of students enrolled in courses and programs wherever located and however delivered.

5.A.1 The institution’s information resources and services include sufficient holdings, equipment, and personnel in all of its libraries, instructional media and production centers, computer centers, networks, telecommunication centers and other repositories to accomplish the institution’s mission and goals.

Library:

The library and information resources are a diverse group of entities on campus. Not only are the library and Information technology services included from the last self-study, but also the E-Learning services and the Disability Resource Center can now be added because of the increased use of technological advancement in those departments. The institution’s information resources and services have been constantly growing since the last self-study and the use of information technologies has grown at an astronomical rate.

The library staff has worked diligently to ensure its holdings are sufficient and current enough to meet curricular demands of our missions and goals. The library director has a staff of 15 (11 full-time and 4 part-time) to meet the student needs on the main campus and three satellite centers. This staffing is adequate in the short term, but, as FTE continues to grow and we expand to satellite centers, more librarians and library assistants will have to be hired. According to ACRL (Association of College and Research Libraries) for our FTE (5,540) for single campus services, the staffing should be:

FTE Students According to ACRL Standards	Administrators	Professionals	Technicians	Other Staff
5000-6999	1	9	12	8

TMCC FTE Students	Administrators	Professionals	Technicians	Other staff
5,540	1	6 (4 full-time and 2 part-time)	4 (3 full-time and 1 part-time)	5 (4 full-time and 1 part-time)

- 1-Lorin Lindsay- Director
- 2-Ginny Knoblauch- Administrative Assistant IV- FT
- 3-Nadine Phinney- Technical Services Librarian - FT
- 4-Neil Siegel- Public Service Librarian & Head of Reference - FT
- 5-John Fitzsimmons- Public Service & Systems Librarian - FT
- 6-Susan Jimenez- Public Service Librarian & Head of Circulation - FT
- 7-Maureen Leshendok - Public Service Librarian (LOA)- 19 hours
- 8-Susan Bradley- Public Service Librarian (LOA) - 19 hours
- 9-Tina Sidles - Library Technician I - FT
- 10-Open position - Library Technician I - 19 hours
- 11-Avis Andrulli- Library Technician II - FT
- 12-Di Morningstar - Library Assistant II - FT
- 13-Jane Zhang - Library Assistant II - FT
- 14-Rebeca Ferrera - Library Assistant III - FT
- 15-Romelia Torres - Library Assistant II - 19 hours
- 16-Mercy Balderrama - Library Technician I - FT (Edison & MDWS)

This table shows that in accordance with ACRL guidelines the library is inadequately staffed with professionals, and classified staff. The weakness here is in librarians with dire needs for a cataloguer, additional full-time reference librarian, and either full-time or part-time librarians for Edison and Meadowood Centers. The library should increase its library staff to bring this category into the recommended guidelines. These extra staffers would help alleviate the stress of the librarians to meet student needs at the main campus and satellite centers.

Information Resources:

As stated in the TMCC Information Technology Plan, the information technology goal for TMCC is to develop a technology infrastructure to provide faculty, staff, and students with the best practices of the industry. The stated vision of the Information Technology Operations (IT0) department is to have an information technology infrastructure that is expandable, adaptable, reliable, disaster proof, manageable, and upgradeable at a minimum cost to the College. It is also desirable that these infrastructures provide a pathway for the integration of existing, but separate technologies, such as the integration of computer and telephony systems, as well as the addition of new technologies without the replacement or major modification of the existing infrastructure. Finally, the intent is to have every Truckee Meadows Community College employee able to use information technology as a tool to provide the right information to the right people at the right time

and at the right cost. The strategic objectives for Information Technology Operations include:

- To provide a quality operational platform of technology to support the various needs of the College.
- To provide timely, effective and efficient support to users.
- To provide appropriate, timely and effective access to all users on all infrastructure systems.

The ITO (Information Technology Operation) is sufficiently staffed for now, but as in the information above, expansion has applied personnel pressure. More ITO professionals will have to be hired. The ITO services are beginning to be stretched with multi-campus/center services. The ITO has a sufficient number of computer labs and computers available for students at the moment. As the campus community grows, so must the number of available computers and labs. The Help desk situation needs to be addressed though. The Help Desk has sufficient budget and is currently manned with student help and full-time staff. With the growth in E-learning and additional online services, the staffing issue will become acute. This service is used by faculty, staff, and students and needs to be funded sufficiently for the services of our college community.

- Computing Resources and Services: At present, the College does have sufficient equipment and personnel in its networking and telecommunication facilities to accomplish the institution’s mission and goals.

To illustrate this, in every TMCC campus or center, the College maintains academic computer classrooms or labs. The distribution of computer labs is as follows:

Location	Number of Classrooms with Computers	Number of Academic Computers
Dandini Campus	90	736
Edison Technical Institute	15	75
Meadowood Center	18	166
Performing Arts Center	1	6
Public Safety Training Center	1	1
TOTAL	125	984

This equates to 67.4% of the 1459 total computers within the College. This is an increase of 245% in the number of available computers in the College since 1998. Additionally, the College primarily uses Windows-based computers along with Macintosh computers in the Graphic Arts, Visual Arts, Chemistry, and Journalism departments. The current hardware specification used for new Windows-based classroom computers is found at www.tmcc.edu/ito/Hardware/PC_Standards/Minimum_Hardware_Specs/minimum_hardware_specs.htm. There is also a classroom within the Computer Technologies department that uses Sun workstations with the Sun operating system. Furthermore,

faculty within the Math and Information Technology Operations department are experimenting with the Linux server and desktop operating systems.

Additionally, the College's data network backbone infrastructure supports 100MB communication within buildings with 1GB connectivity between production servers on the Dandini campus. Connectivity to Dandini from the Meadowood Center and the Edison Technical Institute is maintained over 45MB microwave radio links. A T1 data link is in place between Meadowood Center and the Edison Technical Institute for failover purposes. Data is transferred between buildings on the Dandini campus with dedicated fiber optic cable. A wireless (11MB) network is available for use in the James V. Eardley Student Center as well as in the Elizabeth Sturm Library.

Finally, 78.8% of the TMCC classrooms have the Smart Classroom technology featuring instructor computers and LCD projectors. Again, this compares favorably to the mean of 42% reported in the FY 2003 Educause Core Data Summary.

Applications Development is that part of technology which supports the college's operational business functions. TMCC is designing its administrative computer environment to provide faculty and staff to access and analyze integrated information collected by the system in an intuitive, effective, and reliable manner. A number of major projects are underway to promote effective utilization of administrative computer resources:

- Document tracking and management system
- Dynamic enrollment modeling
- Employee entrance, exit, transfer processing
- Grade book
- Library SQL-Oracle interface
- Part-time faculty application pool and hiring process
- Web Scholarship application process
- Web-based Portal system
- Web-based student application process
- TMCC Web Site

Media Services is that part of technology which supports the college's academic and administrative operations through the use of multimedia such as video and audio systems. A primary goal of Media Services is to increase the visibility and viability of multimedia systems as an instructional tool.

Strengths

- College wide process for review and prioritization of projects
- Dedicated and talented Application Development staff (programmers, webmaster, user consultant and security coordinator)
- Reliable operating systems
- Solid core of application servers including a web cluster

- Solid core of development servers
- Strong application development framework
- Up to date application development tools

Weaknesses

- Documentation of program development and change request process
- Insufficient training budget for Application developers
- Progress developing new applications is slow due to time spent maintaining legacy code
- Weak in the new MS .net development environment

The Disability Resource Center is currently adequately staffed to serve the approximately 300 qualified students. The major problem for the DRC is the lack of space. The DRC has a staff of four plus the student population using the office of 670 square feet. The DRC was fortunate to be able to hire an assistive technician in a professional capacity. He, unfortunately, does not have an office space or a quiet environment necessary for the use of some of the voice activated programs he uses to train students on adaptive technology. There are constant interruptions from phones ringing at the reception desk and the student worker station located right next to his desk, students needing assistance, and note takers entering and leaving to make copies of their notes for the student note-taking service. The DRC has received several complaints this semester about the quiet room used for exams and a study area. It has no sound reducing barrier to keep out the noisy distractions of the staff working and equipment running in the office. It has a large single paned glass which is necessary to monitor exams, but allows noise to enter. This could be a compliance violation for students needing a distraction reduced environment.

E-Learning is a new service since the last self-study. Originally started as a community broadcast service on SNCAT, it has become dominated by web-based courses. The growth of this area has been dramatic in the last few semesters. Staff, equipment and resources are being stressed by the rapid growth and popularity of the on-line classes. E-Learning should be commended for helping achieve the goal of servicing the community at-large in higher education by offering as many classes as possible on-line. E-Learning has one administrator, one office assistant, and one technical assistant. This office will have to hire more technical assistants if the rapid growth continues. The on-line classes are limited only by the amount of faculty that chooses to teach on-line. E-Learning has been proactive in offering online teacher training, and should be commended for their efforts.

5.A.2 The institution's core collection and related information resources are sufficient to support the curriculum.

Library:

The library collections have grown considerably since the previous self-study. The Elizabeth Sturm Library was just opening during the last self-study, and now it is a fixture on the campus because of the integration of the library into curriculum and the proactive nature of the 100+ library tours performed each semester. The library should be commended on its careful and thoughtful use of its resources to grow its depth and breadth of materials to support the academic environment on the campus. One problem that was noted in the last self-study was that the library had not developed a collection development policy nor a materials selection policy. Both of these weaknesses have been addressed by the library staff. The biggest problem the library faces is funding. The library's funding has remained fairly stagnant in the last ten years. The ACRL recommends a minimum of 6% growth in funding per year, while saying a 9% growth would be excellent. The Table below shows the acquisitions and operating budgets.

Year	Operating	Library Acquisitions
1996	\$40,569.00	\$147,716.00
1997	\$57,685.80	\$122,548.64
1998	\$42,811.51	\$147,716.00
1999	\$37,104.68	\$147,534.10
2000	\$30,115.10	\$141,617.05
2001	\$47,985.34	\$147,716.00
2002	\$23,453.11	\$145,791.66
2003	\$23,453.11	\$129,776.21
2004	\$36,653.68	\$177,716.00
2005	\$36,973.00	\$147,716.00

In any event, the library has made sure programs that rely on current information have had access to the most current information. The nursing program has benefited from this. Over the last seven years, the library has written \$74,000 in successful grant requests. These grant monies have originated from the TMCC Foundation, Perkins, and LSTA. The library has done a nice job of servicing the programs, but there are holes in the library's collection due to funding issues. These deficiencies are most evident in the vocational education programs. In many instances, these deficiencies do not reflect the library, but reflect database vendors lack of vision in the establishment of online resource database to address these programs. Currently, the library is working with EBSCO in recommendations for a dental hygiene and veterinary journal databases. The library also has purchased many database services to provide for the nature of the community college students. Library surveys reveal that most of our students work 30+ hours per week and take on average three classes per semester. Ninety percent of our students have a computer at home with internet access and perform the bulk of their research from home. Subsequently, the library's mission has changed in the last seven years from providing basic reference questions to instruction on how to determine the best resources for specific classes. Below are the current library totals of their hard materials.

Library Totals	# Volumes	Added 2003-2004	Withdrawn Items	Grand Total
Paper Volumes	45,960	2705	370	48,295
Paper Titles	41,669	2685	259	44,095
Microforms	67343	0	0	67,343
Serial/Periodicals	714	117	0	831
A/V Units	6,952	415	53	7,367
Archives (linear feet)	161	0	0	161

Information Resources:

The ITO has adequate computer software and programs for the general student population. The computer labs are ADA compliant, so that a wheelchair bound student could use the lab, but they do not have any accommodations for visually impaired students. They are referred to the DRC which has very few resources for this type of student.

Computers within academic classrooms are on a four-year lifecycle replacement schedule, ensuring that students and faculty have access to technology sufficient to support the classroom curriculum. This claim is also supported by the 984 computers available for use on TMCC campuses and centers for instructional purposes. The College also maintains two general access labs open to all students along with a study kiosks and a dedicated computer classroom in the library. The hours for the general access labs are posted on the web at www.tmcc.edu/ito/Academic/GACL_Hours/gacl_hours.htm. Funds are available through legislative funding to provide for the replacement of computers in administrative offices.

The Academic Computing section of the Information Technology Operations department maintains an image of the software commonly installed on all academic computers. The listing of this software along with department specific software is shown on the TMCC web site at www.tmcc.edu/ito/Academic/Lab_Software/lab_software.html.

All academic classrooms are connected to or have access to the Internet. Moreover, the College has invested in a comprehensive distance education platform (WebCT) to provide 24/7 access to academic instruction. Additionally, the College supports the transmission of classroom instruction over cable which is then available for access over public access channels on the local cable television network.

The Information Technology Operations department is charged with providing and managing the central information and technology for the College by providing core services of:

- Local Area Network Administration Support,
- Telephone and Voice Mail Services,
- Wide Area Network and Internet Connectivity,

- Electronic Mail Access and Administration,
- Web Server Access,
- Engineering, Planning, Wiring, Repairing, Changing, and Project Management of Network Infrastructure and Telecommunications
- Information Technology Security Services (to include network firewall and authentication along with anti-virus and anti-spam filtering),
- Information Technology Planning, Design and Development of Policies and Procedures,
- Monitoring technology developments to keep the College current, and
- Maintaining ancillary and emergency back-up equipment which supports network and telecommunications

All of the services above are essential for academic and academic faculty and staff in the performance of their jobs.

E-Learning also offers a wide range of courses which can be worked on at various times by the student. The E-Learning supports students well. The E-learning and the library are working on a virtual tutorial of the library book catalog and databases. E-learning has also purchased Smart-thinking which offers ten hours of on-line tutoring for each student at TMCC. In addition, E-learning offers students their own Web CT account, and all students receive an email address through SCS (System Computing Services), which makes technical access and accommodation available to all students at TMCC.

The Disability Resource Center maintains an alternative text program. The DRC first requests copies of books on CD from the publisher, which is provided at no cost to the DRC. When received, the DRC gives the students information to download the program, Read Please, on their own home computer to have the book read back to them. If a student wants to also access this program on campus, or does not have a home computer, the program is available at The Source and the DRC student computer. If the book is not available on CD from the publisher, the DRC has a membership to a service called Reading for the Blind and Dyslexic, which has many textbooks available. The student is issued a special tape recorder or CD player ordered from this organization which reads back materials in audio format. The college pays for the cost of the specialized equipment and the membership. As a last resort, if a book is not available through the publisher or Reading for the Blind and Dyslexic, volunteer readers are solicited to provide the materials on audio tapes. Only two such readers were used for the Fall 2004 semester. The DRC does not currently do in-house scanning and text book reproduction. TMCC would have to allocate space to set up scanners and computers with adaptive software to do this, but the DRC hopes to have this system in the future. The DRC Director has been working with the University of Nevada, Reno to research its system for future implementation at TMCC. The DRC does not need more equipment. If equipment is needed, the DRC has a fund to purchase equipment, but, once again, space and storage of the equipment is a concern.

5.A.3 Information resources and services are determined by the nature of the institution's educational programs and the locations where programs are offered.

This sub-standard is problematic at TMCC and needs much improvement. Each section of the information resources has its own ideas of what constitutes “the nature of the institution’s educational programs.” More integration of the library and informational resources, along with institutional planning will improve this. During the last self-study, the audiovisual resources had been moved to the Public Information Office. The recommendation was that TMCC not lose integration of sources. This appears to be exactly what has happened. When asked about integration sources, no one even mentioned PIO which shows that the connections have been weakened if not severed.

Library:

The library does a nice job of gathering materials based on institutional and instructors’ needs. The library has consistently updated and researched new materials to include in its collection. The main problem with the library is that its presence at satellite centers is minimal. Library usage is only at the main campus. Edison center has an e-library, but the librarian there was dismissed when the grant-funded position was no longer funded. Currently, the Meadowood Center and Edison Center share a library technician. The library technician rotates between the two centers. This, however, is proving insufficient for the student needs. TMCC has received several letters from students complaining about the limited days and hours. The library, even though it should be a centerpiece for campus information resources, doesn’t seem to be acknowledged as such by the TMCC system. The ACRL standards state that the library should have general study areas, group study areas, and one-on-one study areas. The library’s space has been compromised at TMCC, by just about everything. Currently the library space is farmed out as non-library offices, meeting areas, and storage. The ACRL contends the library should be used exclusively for learning related activities. As it stands now, the library is a place the system takes for granted.

Information Resources:

The ITO is doing a pretty good job of supplying computer labs and lab hours to the students at the main campus and satellite centers. They offer a wide variety of times and hours to accommodate the students and faculty at TMCC. The ratio of computer labs and hours is sufficient for our FTE. There are a number of computer labs that could be opened as volume increases in the future.

The College installs and uses specialized software for the Art, Anthropology, Applied Industrial Technology, Art, Computer Technologies, Engineering, Graphics Arts, and Visual Arts departments to include:

- Apple’s Final Cut Pro video editing software
- AutoDesk AutoCAD software
- LUNA Insight Art History images software
- Macromedia’s Dreamweaver, Cold Fusion, Director, Fireworks, and Flash software

- Microsoft Visual Studio .NET
- Performing Arts Center music composition and digital music editing software
- Specific biology and chemistry-related software

The College also has a Citrix server dedicated for instructional purposes. This allows the Academic Computing section to quickly provide access to software not available on the normal academic computer software image. It also allows the College to respond to short notice requests for the installation of unique software for academic use.

The Chemistry, Computer Technologies, Engineering, Graphic Arts, and Journalism use hardware that is typically either upgraded or specific to the department's academic needs. For example, the Graphic Arts department uses Apple G4 or G5 computers since that is the computer of choice in the graphics arts industry.

TMCC also uses Network Services for connectivity, such as:

- Management of network file servers supporting customer data storage, printing, applications, and web services.
 - [Network Passwords](#)
 - TMCC's network operating systems are powered by Novell NetWare, Windows, and Linux servers.
 - The primary desktop operating system is currently Windows XP Professional.
- Provide Network Internet Protocol (IP) Addresses
- Manage and coordinate TMCC's [telecommunications cable plant](#) installations and upgrades
- Process adds, moves, and changes of data and phone lines
- Provide network connectivity for TMCC workstations
 - NOTE: We do not allow network connection cables longer than 10 feet to be used on the network. Cables of this length cause network attenuation and connectivity problems. Eliminating them from the network keeps network traffic moving quickly and efficiently and eliminates unwanted "noise" on the network.
- Monitor and measure network performance of over 1500 network devices and conduct trend analysis to assure proper network efficiency
- Provide technical support for end users

Applications Development encompasses the part of information processing which supports the college's operational business functions. The current systems within the scope of the Applications Development team include: Human Resources; College Accounting and Budget; Resource Management; Position Control; Library; WEB databases; Instructional Delivery Systems; and Student Information systems. Applications Development also has several ancillary manual, standalone, and internally networked systems within its domain (examples: Xerox/Phone billing, ID card system, and Web forms submission and reporting, etc.). Support for all of these administrative systems is included in this domain. These include hardware (application servers),

application support technicians (user consultant, programmers, etc.), security coordinator (System Computing Services (SCS) Applications & In House Applications), report writers, database administrators, Web author/developer, project managers and a group manager. In September of 2001 the Administrative Computing Committee (ACC) was made a sub-committee of the Technology Committee. The ACC is the committee that sets Applications Development's project priorities and allows for college wide input and discussion. It is through the Administrative Computing Committee that most strategic and operational objectives are developed.

The DRC is organized based on documented learning disabilities, which makes the challenges of accommodation different from semester to semester. The DRC staff does a good job of trying to reach reasonable accommodations, but limited resources can tax the ability of the DRC.

E-Learning doesn't suffer from the problems as much as the other aspects of the information resources. The faculty and departments determine much of the content that appears on the web. Courses can be accessed from any computer around the world.

The weakness here is that there is not a coordinated effort of all branches of the informational resources. ITO works strongly with the library and E-Learning, and the DRC and the library and DE work a little bit together, and ITO helps out the DRC, etc. There is no strong coordination between these elements that could eliminate overlap and streamline the informational resources at TMCC.

Recommendations and timelines:

The college should attain more funding for the library and information technologies. As our college continues to grow, more technical services and informational resources will be needed.

The college should immediately resolve the DRC space problems. Failure to do so may bring us into conflict with state and/or federal law.

The library should be given more space for study areas, removing non-library services from the library space. This should be done as space becomes available.

There needs to be a coordinated effort among the four branches of the library and information resources. The directors of these branches need to coordinate and articulate a unified plan to coordinate activities among them. This can begin in the Fall 2005 to better coordinate our efforts and streamline our services to meet our mission. The technology plan is a step in the right direction.