2013

Merritt College Tech Plan

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Reviewed by College President Ambriz-Galaviz

Merritt College Technology Plan: Updated Fall 2013

Technology Plan Points

Institutional Success

Merritt College recognizes the interdependence of institutional success, student success, and information and educational technology. In order to succeed on these three fronts, our institution must stay current with advances in information and educational technology and make them available to our faculty and our students. As an institution we commit ourselves to providing campus administrators, faculty, staff and students with the broad array of technological innovations in education, and to monitoring technology in the workplace, so that we can continue to provide our College community with the tools to become successful.

Values of Commitment:

1. The College recognizes educational technology as a significant change agent in redefining the goals and objectives of the campus.
2. The College seeks to develop information and educational technology resources and opportunities that will help draw students to Merritt College, and promote their success once they enroll.

3. Such resources and opportunities include:
   a. Smart classrooms
   b. Access to hardware, software, and training resources
   c. On-line and hybrid courses
   d. Technology specific to the fulfillment of the Student Success Act mandates
4. The College, through the Technology Committee, provides ongoing information to all employees about the current availability of information and educational technology, within the College and from external sources.
5. The College facilitates information and educational technology communication and sharing among faculty, staff, and administrators through professional day classes, on-going training sessions, vendor demonstrations, web and email postings, and Technology Committee resources.
6. The College develops and uses information and educational technology systems that support the business operations of the College, such as online registration, paper-free communication (where appropriate), and networked communications with the assistance of District IT
7. The College seeks to establish a campus-wide network to which all campus-related computers can connect.
8. The College and the District collaborate to provide effective web-based services for students, faculty, administrators, and staff, to speed up College operations, and permit remote accessing with the assistance of District It via Prompt, Passport and email.
9. The College ensures the ability for campus-wide wireless Internet access to as many locations as the current infrastructure permits with the assistance of resources from the District.
10. The College and District assesses the capacity for sufficient bandwidth to provide for the orderly expansion of online resources and technology utilizing Merritt IT & CENIC.
11. The College works with the district to implement smart classrooms (information and educational technology equipped)
12. The College provides an internet-connected computer classroom for library instructional purposes.
13. The College is examining all ADA guidelines related to information and educational technology equipment and use for the integration into its educational planning.
14. The Technology Committee addresses technology-related concerns and provides recommendations on behalf the entire College. Where appropriate, the Technology Committee provides recommendations for fund allocation for equipment, supplies or other technology-related material.

15. The College considers information and educational technology needs related to all other areas of campus development, such as building renovation and expansion, interior remodels, and long-range physical plans.

Merritt College IT Strategies for 2013-14

The College Technology Committee established the follow priorities for this academic year which advance student academic success:

I. Resources
   a. Staffing
      District Technology and Distance Education develop and maintain a one-stop website for students
   b. Identify sufficient resources to fulfill IT strategies
      i. Measure A/Fund 1/CTE/other

II. College and District Infrastructure/ IT included in planning and cost analysis to ensure state of the art technology
   1. a. Library
      b. Allied Health Building
      c. Computer Refresh
      d. P-218 Fix
      e. "Total Cost of Ownership Checklist" for all purchases
   2. Information Technology to be completed in all Unit Plans and Program Reviews Updates

III. Communication and Collaboration
   a. Education Committee
   b. Online orientation--role of Merritt vs district
   c. Distance Education--systems and polices
   d. Facilities

IV. Evaluation
   A. Identify the tools and instruments to evaluate support student success initiatives at the college and district levels.
      1. Smart Classrooms
         a. Access
         b. Utilization

2. Financial Aid
3. Counseling
4. Orientation

Technology Spending and Funding

It is critical to the effective use of information and educational technology that the College obtain funding sources for hardware and software, repairs and maintenance, consultants, training, distance education resources, web resources, and networks. These sources must be identified, sorted and categorized according to purchase and funding deadlines, prioritized according to cost, convenience, and evaluated according to total costs of ownership. The College must also be committed to establishing connections to and relationships with vendors, consultants, public and private agencies, and other information and educational technology funding opportunities.

1. At least once a year the College Technology Committee attempts to compile a prioritized funding list for new information and educational technology purchases, upgrades, and repairs, based on institutional programmatic goals and departmental needs described in the College Education Plan. This list will be made available to staff, faculty, and administrators upon written request.
2. The College Technology Committee strives to develop information and educational technology funding goals based on a percentage of the overall College discretionary funds.
3. The College's Budget Committee in collaboration with the Technology Committee seeks to periodically determines the total costs of information and educational technology based on the following costs:
    a. Research
    b. Hardware (equipment and upgrades)
    c. Software (applications and upgrades)
    d. Licensing fees
    e. Training
    f. Maintenance
    g. Repairs
    h. Disposal or recycling
    i. Consultants fees and salaries
4. The College Technology committee will assist establishing a mechanism to evaluate information and educational technology funding sources, such as:
    a. College

b. District
c. State
d. DSPS
e. Federal [VTEA and grants]

5. The College Technology Committee will periodically determine unmet information and educational technology funding needs, and devise strategies for generating them.
6. The College Technology Committee and along with the District Technology committee work to secure partnerships with state and industry to acquire and support information and educational technology.
7. The District with consultation with the College Technology Committee and college leadership team work in developing service agreements with vendors to assist in maintenance and upgrading of information and educational technology equipment.
8. The College Technology Committee advocates for District Purchasing to enter into cost-effective hardware and software contracts.
9. The College Technology Committee along with the college leadership team will develop information and educational technology funding needs according to short (up to 18 months), medium (18 months-4 years), and long (4-8 years) projections.
10. The College Technology Committee, College Budget committee and the District Technology endorse the establishment of line item funding for information and educational technology (TTIP/TCO).

Information and Educational Technology and College Infrastructure

The College acknowledges that information and educational technology success begins at the most basic level, that of the physical organization of the campus. To this end, the College has begun to support the campus-wide installation, in both existing and future buildings, of state-of-the art cabling, transmission devices, switches and relays, and any other equipment necessary to support IT use.

1. The College has and continues to retrofit, to the extent possible, all existing buildings with cables, conduits, wire closets, wireless transmitters, and Ethernet switches that reasonably accommodate information and educational technology needs for the next ten years.
2. The College includes technology planning as an integral and essential part of new facilities development. This planning will make every attempt to include

basic groundwork such as cabling, conduits, wire-closets, and transmitters, along with office, conference room, study area, library, and classroom design that accommodates future IT needs.

3. The Facilities Committee will meet with the Technology Committee or its designees during the program development, preliminary planning, design development, construction document, and construction phases of all projects to insure that information and educational technology is sufficiently integrated into the design process.

Update:

- **Wireless:**

Due to ever increasing demand for wireless access from student and staff mobile devices, the College Network Coordinator worked with District IT to increase the number of vlans (virtual local area networks) dedicated to wireless activity. Monitoring shows that almost 3,000 devices have accessed wireless in a single day with no problems. These devices range from laptops, iPhones, Androids, Blackberry's, iPod's, iPad's, and other devices. The complaints about wireless access have stopped.

- **Network Services:**

Merritt network services exist at 2 parallel but separate systems to ensure security for Administrative processes.

Administrative:

1. All offices have direct access to District Services like PROMT, Mainframe, SAFE, etc.
2. All offices have access to Merritt College Administrative servers.
3. All offices have access to secure network printing services.
4. All offices have internet access.

- **Instructional:**

1. All computer labs & classrooms have access to Merritt Instructional Servers.
2. All computer labs have access to network printing
3. Department specific software has been installed in specific computer labs used by their students, such as Paralegal, Chemistry, Biology, Math, Landscape Horticulture, etc.
4. General use software is available on servers and workstations in all student computer labs.
5. All computer labs have internet access.
6. All classrooms have internet access.

7. ~~Some~~ Most classrooms have wireless access to internet.

➢ Instructional Network Printing:

1. Added GOPRINT printing system to Learning Center to replace previous manual card punching system. Students can print from computer lab workstation, use Goprint or ID card to pay for printjob using one of the 2 touch screen GoPrint PayStations.

2. Upgraded Library GOPRINT system to new sofware & hardware versions. They now have 1 touch screen GoPrint PayStation to replace their old GoPRint pay station.

➢ Compass Assessment Testing:

1. Successfully moved Compass Assessment Testing Client/Server application to Compaq Microsoft 2003 server.

~~2.~~ Compass Assessment Testing is now functional in 4 computer labs. ~~and will soon be available in P218 & CIS computer labs.~~

~~3. New Compass Internet Version is in testing stages and will be available for use in January 2011. This will allow Minh V. Dao to offer testing in more locations including off-site locations, high schools, etc.~~

➢ SARS Software (instructional & administrative)

1. SARS-Trak (kiosk at front desk) and SARS PC-Trak Student Tracking Systems (for computer labs) were installed in Learning Center computer labs and Fitness Center to keep track of amount of hours each student spent and on which subject. Reports are obtained from SARS-Trak at end of semester to determine grading and also usage of each area.

2. SARS-GRID scheduling module was installed in Counseling, DSPS, EOPS, Puente, etc. Along with SARS-Chat, these programs greatly enhance services to students.

3. SARS-CALL module has been setup for Counseling, DSPS and EOPS to remind students of appointments. SARS-CALL also can be used by Merritt Administration for notifying students of events and important information.

- **Internet Bandwidth:**

Internet Bandwidth was recently upgraded from T3 to Gigaman which was accomplished by Merritt IT Staff working with CENIC (Corporation for Education Network Initiatives in California). The increased bandwidth was not be fully realized campus-wide until the Cisco PIX Firewall was upgraded in 2013 from a 100GB model to a 1000GB model which was included in the District-wide Camera Security Project. Merritt College Network Coordinator worked with CENIC, District Physical Plant, and District IT to accomplish this upgrade.

- **Computer Labs**

1. All computer labs are online with access to internet.
2. All computer labs have access to Instructional Network Servers with a variety of department specific applications as well as general use applications.
3. Computer labs were upgraded with new computers in Summer 2013.
4. ~~P218 computer count was increased Fall 2010 to accommodate increase in students using new computerized Math class software~~ (unnecessary)
5. Fifty-one (51) classrooms were upgraded to "Smart Classrooms" in 2011. The Smart Classrooms include minimally 2 projectors, 1 smartboard with pen set, DVD/VCR player, document viewer, computer, laptop compatible cabling, microphone, sound system, hearing impaired equipment, wireless access point, networking & internet cabling, and more, all controlled by Extron equipment from built-in desk and/or cabinet. Two rooms were equipped with enhanced capabilities.

- **Building Remodeling & Construction Projects**

Merritt is in an extensive building and remodeling phase with substantial changes being made to several buildings on campus. ~~Smart Classroom plans for buildings D and A are attached to this document as Appendix A.~~

1. Merritt IT staff attend most meetings to ensure sufficient technology infrastructure is included.

2. Merritt IT staff have been successful in getting "IP Phone Ready" plans included in all remodeling projects including R, P 3rd Floor, A swing space, Q ~~1st & 2nd floors~~, L, part of H, and SAH, the new Science and Health Building under construction now. "IP Phone Ready" environment saves construction funds by not pulling phone wires separately, but rather by using Ethernet cabling for voice & data. Merritt plans to implement IP Telephony in the near future which will greatly improve communications on and off campus. For instance, currently emergency services cannot track a call back to room or building but will be able to do this when IP Telephony is installed. It will also save the college money on moving existing phones and installing new ones, etc.

- **Solar Panels online**

  Chevron Solar Panels have been installed and communicate with Chevron servers and other outside services via internet connections setup by College Network Coordinator. The LCD screen in R-Bldg displays real-time energy saving activity for all to see.

- **Current IT Needs:** ***UPGRADE DELTA ENVIRONMENTAL SYSTEM !!!***

  ~~1. Upgrade 8 obsolete HP Compaq servers.~~ Ordered & received.

  2. ~~Add additional 4 servers for redundancy and for load balancing of applications.~~

  3. Upgrade network infrastructure fiber from multimode to singlemode.

  4. Upgrade obsolete Cisco switches to next generation 1000GB model, including additional port capacity.

  5. Upgrade phone system to IP Telephony VoIP (Voice over Internet Protocol)

  6. Add more wireless access points for classroom usage.

  ~~7. Add more vlans to wireless network.~~

  8. Hire additional IT staff to assist with Smart Classrooms.

  9. Add more network printing to maximize scarce resources inside departments & programs. Individual printing is not cost effective.

  10. Upgrade multicast imaging software.

11. Purchase annual subscriptions to Adobe products for campus-wide usage.
12. Purchase annual subscriptions to IT monitoring tools to improve service and prevent network problems.

- **Distance Education**

Organizational problems, especially infrastructure and technology problems can impede the progress of the development of distance education. Faculties who teach distance education courses need organizational and administrative support from the institution. Funding should be provided to create an administrative unit that is to be responsible for managing any Distance Education program. Institutional leaders must be committed to distance programs.

Some students, particularly those without home computers will need additional support to participate in hybrid or distance education. In addition, it is important that computer labs on campus can provide access and support to students. Lab assistants, for example, need to be trained so that they can help students in accessing online classes and materials.

Developing distance learning course material must be done by the instructors or students will be faced with expensive online materials from textbook providers. Resources should be identified to support this process.

In distance learning students and teachers find themselves playing different roles than is the norm in traditional education. The teacher is no longer the sole source of knowledge but instead becomes a facilitator to support student learning, while the student actively participates in what and how knowledge is imparted. More than any other teaching method, distance learning requires a collaborative effort between student and teacher, unbounded by the traditional limits of time, space, and single-instructor effort. In order to meet this challenge it is necessary for faculty to receive the proper training, resources and ongoing support.

- **Moodle**

Merritt currently has a .25 position Distance Education Coordinator to provide support for online teachers using Moodle. At this time the district hosts Moodle for all 4 colleges on a district server. It might be a good plan to convert this system to allow each college to have a separate Moodle, which would allow each campus to provide support and installation of modules. Support is needed for the ongoing creation of web enhanced, hybrid or fully online courses. Some instructors need help with instructional design. Online and face to face support is necessary for Merritt to continue to grow in offering online or hybrid classes.

Merritt College is currently offering both 100% online courses along with array of hybrid courses:

Departments:

Business
Computer Information Systems
Educational Technology
English
Mexican & Latin American Studies
Political Science
Psychology
Real Estate

Smart Classrooms:

Merritt IT Staff are working closely with Smart Classroom consultants, administration, and faculty to ensure best design for each room and for each department's needs. Please see the plans for Buildings A and D at the end of this document. Project completed

Inventory of Existing Equipment

In order to keep information and educational technology systems and equipment up-to-date and functioning at the highest possible levels, the College will keep an inventory of all hardware and software. This inventory will allow the College to assess the extent and state of its equipment, help facilitate repairs, help determine obsolescence, help establish funding requirements for new purchases, help assure that each department has adequate hardware and software, and help assure that information and educational technology is distributed evenly and fairly across campus

1. The College information and educational technology staff will compile and maintain an inventory method to account for all existing equipment. The inventory includes the following information:
    a. Location
    b. User(s)
    c. Department
    d. Make
    e. Model
    f. PO#
    g. Description
    h. Operating system
    i. Year of purchase
    j. REQ#
    k. Warranty and Date
2. The inventory list will be kept by the Information and educational technology Department. Copies will be kept in Division Offices.
3. Faculty, staff, and administrators will notify the inventory keeper of all new information and educational technology related purchases, changes in equipment location or users, and disposal of obsolete equipment. The Information and educational technology Department will distribute inventory forms to all departments, with a checklist verifying the status of existing equipment, and accounting for new purchases, and for equipment that has been relocated, abandoned, or no longer in use. * no
4. The Information and educational technology Department will update the list each July (at the end of the purchasing cycle).
5. The Information and educational technology Department will make the inventory list available in electronic format upon written request, or accessible from a secure server or website.

Smart Classrooms

In 2010, 51 classrooms on campus were upgraded to smart classrooms, each level 1 classroom includes

a. Two Projectors
b. Smart boards
c. In-class computers for instructors
d. DVD/VCR player
e. Sound system
f. Microphone
g. Hearing impaired equipment
h. Comprehensive security systems
i. R110 Merritt Student Lounge & P307 were updated with streaming video *
j. Wireless access capacity on campus was expanded
k. The implementation included training for faculty

These classrooms will need to be maintained. Equipment may need to be repaired or replaced.

Hardware and Software Purchasing and Distribution

In order to facilitate the purchase and distribution of information and educational technology equipment and services, the College will develop a process for monitoring new hardware and software releases, for replacing obsolete equipment and outdated applications, for buying new equipment and programs, for making information and educational technology systems and equipment available to classrooms, offices, and labs, and assuring that students, staff, faculty, and administrators have knowledge of and access to campus information and educational technology resources.

1. The College will provide all staff, faculty, and administrators with an orientation to campus information and educational technology systems, including an overview of existing hardware and software, educational and administrative application opportunities, purchasing, and maintenance procedures.
2. The College will provide faculty, staff, and administrators with state of the art hardware and software such as:
    a. CPUs
    b. Laptops

c. Monitors
d. Printers
e. Scanners
f. Wireless apparatus
g. Peripherals (cables, hubs, small externals)
h. Software
i. Plug-ins
j. Video on demand
k. Centrally distributed media center
l. Mobile equipment where suitable

3. The College continues to monitor industry trends on an ongoing basis to identify new information and educational technologies and their potential applications.
4. The College develops and monitor criteria for prioritizing new purchases and upgrades. Purchasing priorities will be based on criteria such as:
    a. the age of the equipment or software
    b. the extent of hardware and software within a department
    c. the effectiveness and suitability of a department's equipment
    d. the short, medium, and long-range needs of departments, as described in Department Action Plans.
5. The College utilizes criteria and monitors older hardware and software for phasing out.
6. The College recommends that new hardware and software purchases, whenever possible, will meet the following criteria:
    a. Common brands. The College will periodically develop and distribute a list to all campus departments of suggested hardware and software brands.
    b. Common vendors. The College will periodically develop and distribute a list to all campus departments of suggested hardware and software vendors.
    c. Shared licenses
    d. Be expandable for 2-4 years (ward off obsolescence)
    e. Be no more than one generation behind the latest version, or more than eighteen months behind a current release.
7. The College Technology Committee will serve as a campus-wide source for information and recommendations regarding information and educational technology purchases and use.
8. The College is committed to develop and implement a web-based equipment site that shows all equipment available for each room on campus, and allows faculty and staff to request delivery of equipment for each room on campus through a reliable, time-sensitive reservation and confirmation process.

9. The College is implementing an evaluation process for existing computer labs on a regular basis for recommendations for repairs, upgrades, and new purchases.
10. The College insure that all computer labs are ergonomically friendly, with comfortable chairs, new mouse pads, adequately bright monitors, and good lighting and ventilation.
11. The College investigates all computer labs ADA compliant.
12. The College researches questions regarding software legality and licensing, and distribute an updated "bullet point" memo to all departments each semester regarding these issues.

Security, Updates, and Filters

The College recognizes that administrators, staff, faculty, and students need to transmit information safely, receive up-to-the-minute protection from viruses Trendmicro and spam Microsoft ForeFront Spam Filter, and be unencumbered in their pursuit of College goals by unauthorized users, unauthorized programs, or unnecessary draws against the campus bandwidth.

1. The College installs, upgrades, updates, and maintains campus-wide security systems offering protection from viruses, spam, and unauthorized breaches.
2. The College provides faculty, staff, and administrators with ongoing access to software and hardware updates.
3. The College provides secure off-campus access to campus information and educational technology resources.
4. The College installs and operates filtering software that blocks programs and operations in computer labs that interfere with normal student, staff, faculty, and administrative use. Such programs and operations include (but are not limited to) nonacademic web surfing, instant messaging, chat rooms, and similar activities that use up College bandwidth, are extraneous to campus purposes, and cause distractions in lab settings. * Difficult to determine non-academic. Blocking is done area by area, not college-wide.

Web Pages

Web sites and web development are essential features of a successful College learning environment. Merritt College commits itself to developing and maintaining a state-of-the art web site and server for use by the administration, staff, faculty and students.

Webpage

Merritt is implementing a new website that will emphasize student access and participation. The new website is utilizing WordPress, an open source software which is gaining a wide array of users in educational settings.

Student services functions being included in the new website,

- Access to their financial aid application along with information about FAFSA and the application procedures
- Access to online Counseling and Orientation
- A&R information and contact information
- Comprehensive Student Success service strategies for online students
- Academic Calendars
- Access to Schedules and Catalogs

The website will contain a two tier system that will maintain campus security while encouraging a collaborative atmosphere for web development. The first tier will be a password protected area, accessible by the web master and designated personnel, and containing the main sections of the campus web site. The second tier will provide virtual space for faculty and departments to develop original web sites within the framework of College guidelines. This tier will include server space, and will be open to upload by the administrators, faculty and departments responsible for the construction and maintenance of the individual sites.

The College is attempting to identify a full time web master position to develop and maintain its web site and support the development of administrator, faculty and staff web sites.

The College supports departmental web development by:

- Providing periodic training and workshops on using standard web authoring tools that are compatible with the web servers on campus
- Designating people to guide the development of department web sites

The College will encourage a uniformed template for individuals and departments web pages framework described above. Original content will include (but is not limited to)

photos, departmental mission and objective statements, faculty and staff biographies, events, new course descriptions, outside links, and other matters unique to each discipline, department, and individual.

The College website and all College-associated web pages is committed to adhering to ADA requirements.

- The Technology Committee will review the College website each semester to insure that all content is up-to-date. This content will include course offerings, events, notices, and any other date-sensitive material.

Staffing and Training

Information and educational technology training for faculty, staff, and administrators is essential to the College mission. Technology training will be broad in scope, including software and hardware instruction, information on obtaining suitable programs, instruction in the use of the College and District network, and teaching staff about the proper channels for making IT related purchases.

1. The College determines current training needs of campus community, and prioritizes them according to immediate, medium, and long-term needs. This determination will be based on the results of a survey sent to and completed by each department.
2. The College implements information and educational technology training based on funding availability, short, medium and long term technology needs as determined in A above, and the academic calendar.
3. The College develops a benchmark for evaluating training execution and quality, and measuring results. The benchmark will be based on the feedback from written evaluation forms given to training participants immediately after each session, and one month after each session.
4. The College is attempting to identify Information Technology experts to assist staff, faculty, and administrators in software and hardware training, depending on funding will determine their degree of availability. This individual will monitor all training needs and recommendations outlined in the Technology Plan, and will conduct a series on regular workshop.
5. The College provides information and educational technology training in the following campus locations:
    a. Classes—traditional and smart classrooms
    b. Library—traditional format, hybrid, and digital library

c. Laboratories—open lab(s)
d. Faculty areas, offices (on campus and virtual), and remote authentication
e. Staff areas—offices, software, and hardware and software “storerooms”
f. Tutoring/Learning Resources—F2F/virtual tutoring, co sourcing tutoring, software licensing
g. Technology Resource and Education Center or Academic Technology Center (ATC) or equivalent, including: -Faculty learning lab -Pedagogy library (print/digital) -Template library/database (e.g. Multi Media Educational Resource for Online Learning - MERLOT) -@ONE -Teacher Learning Technology (TLT) Roundtables
h. Distributed media/distance learning, including video on demand, and satellite distribution (upstream/downstream)

6. The College develops resources to train faculty, staff, and administrators in:
    a. Choosing appropriate vendors, equipment, and supplies
    b. Teaching-related software
    c. Online courses
    d. Academic grade and record-keeping software
    e. Office software facilitating day-to-day College operations, and reducing paperwork
    f. Individual faculty, staff, and administrator web page development
    g. Using the College and District networks
    h. Basic information and educational technology equipment maintenance techniques
    i. Backup applications

7. The College supports in-house training in the form of:
    a. Staff Development workshops
    b. individual staff development training
    c. in-house information and educational technology trainer
    d. Web training via district (such as M/S Office training)
    e. PeopleSoft training via district
    f. Collective Bargaining Agreement (CBA) funds

8. The College support off-campus training opportunities such as
    a. Information and educational technology workshops
    b. Conferences
    c. Training from vendors
    d. Self-training

e. Mentors
f. Print and digital resources.
g. Online training resources

9. The College supports sabbaticals and release time for faculty, staff, and administrator information and educational technology training.
10. The College Technology Committee advocates hiring a part-time or full-time Information Technology expert to assist staff, faculty, and administrators in software and hardware training. The College will recommend that the District allocate a minimum of $25,000 annually to the Merritt College Staff Development Committee to support this position.
11. The College Technology Committee strongly recommends the addition of information and educational technology staff person to improve IT service to the college, and to perform office and administrative tasks.
12. The College supports identifying additional students to assist students and faculty in computer labs.
13. The College is creatively creating an internship program for students that helps them gain job experience, improves information and educational technology services for faculty and students.