



Instructional Computing Technology Committee (ICTC)

Academic Program Planning and Review Recommendations (APPR) 2006–2007

To: Dave Gift, Vice Provost of Libraries, Computing and Technology

From: Instructional Computing Technology Committee (ICTC)
Danielle Nicole DeVoss, Chair

Date: February 14, 2006

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THE COMMITTEE

The following 2006–2007 APP&R document was prepared by the Instructional Computing and Technology Committee (ICTC) for David Gift, Vice Provost of Libraries, Computing and Technology.

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SUMMARY

BROAD PRIORITIES

We begin by listing five guiding principles that we believe are absolutely essential to any instructional technology goals and thus are critical to consider in the allocation of the TLE funds.

1. There must be incentives, training, and support for faculty.
2. There must be effective user help systems and widespread information dissemination.
3. There must be technology-rich learning spaces.
4. There must be continued availability of TLE funds.
5. There must be accessibility for people with disabilities.

SPECIFIC RECOMMENDATIONS

1. Increase commitment to training and support of faculty through workshops, presentations, events, and peer-to-peer activities.
2. Improve the dissemination of information about faculty technology training efforts, including a web portal with information about local, national, and international instructional technology best practices.
3. Increase financial and technical support to sustain and develop blended and online courses.
4. Continue support of ANGEL and LON-CAPA, and consider other potentially useful courseware.
5. Maintain and upgrade existing technology classrooms.
6. Continue conversion of non-technology classrooms to technology classrooms
7. Continue classroom design assessment that engages all stakeholders and users.
8. Create new computer laboratories that accommodate student laptops and other layouts (e.g., pod and cluster designs).
9. Convert computer labs that are underutilized for teaching to flexible, collaborative, student work environments.
10. Evaluate functional electrical outlets in public spaces and common areas.
11. Continue assessment of security in wireless spaces and across wireless networks.
12. Continue testing of wireless signal strength and coverage.
13. Showcase best practices in innovative instructional uses of wireless.
14. Emphasize the importance of accessibility and usability of instructional technology spaces, and support related projects.

15. Gather University data regarding effectiveness of instructional technology and make it broadly available to CCSAC and others.
16. Assess blended and online course delivery across the University, addressing the related pedagogical, technological, and economic issues.

SPECIFIC TLE REQUESTS

ICTC supports the following TLE requests, as the requests are consistent with the purview of the Committee and with the above recommendations.

Instructional Media Center

- Faculty/TA Instruction and Technology Development Room
- 30 Crestron Control Systems
- Portable Video/Data Projectors
- Laptop Computers
- Portable VCR/DVD Players

Broadcasting Services

- Upgrades to 1208 and 1220 Engineering Building conference rooms
- Computers for 1208 and 1220 Engineering Building and 145 and 204 Comm Arts and Sciences videoconference rooms
- Improvement to Student Monitors in 145 Communication Arts Building
- Studio A Cyclorama
- Upgrade Final Cut Pro from Ethernet to Fiber Channel

Academic Computing and Network Services

- Server Infrastructure
- Hardware for Computer Labs
- Software for Computer Labs
- Wireless
- Email Storage/CPU Expansion
- Network-Backbone Upgrade

Instructional Technology Support

- New Technology Classrooms
- Upgrade/Replace Tech Room Equipment

Libraries

- Public Access Computers
- Electronic Resources

BROAD PRIORITIES

Framing the Committee's specific recommendations and the related support of TLE requests are the following five guiding priorities:

1. **There must be incentives, training, and support for faculty.** Faculty training and support are key to enacting any future instructional technology goals and to supporting existing faculty initiatives. Although faculty may very well be expected to engage and integrate instructional technology as part of their faculty responsibilities, in many cases this is work that goes unrecognized in, for instance, tenure review processes. We acknowledge the difficulty and complexity of providing training and support, but we also believe that it is part of the purview of the office of the Vice Provost for Libraries, Computing and Technology to take an active role in faculty training and support initiatives.
2. **There must be effective user help systems and widespread information dissemination.** The Committee recognizes the support of such robust systems as help.msu.edu, computing.msu.edu, the MSU Computer Help Desk, and other communication and support components on campus, but a broader system of communication is needed. Communication of instructional technology-related events, opportunities, and changes is crucial to fostering a healthy ecology of technology use on campus. A sustained technology infrastructure requires further modes of communicating instructional technology initiatives, best practices, and issues.
3. **There must be technology-rich learning spaces.** The design of and access to technology-rich spaces are critical to supporting instructional technology initiatives. As technology evolves, so does pedagogy, and much teaching is currently guided by active-learning principles. As we create new and redesign existing technology-rich spaces, both physical and virtual, we must be bold in our designs and progressive in thinking about the learning spaces.
4. **There must be continued availability of TLE funds.** The \$10.4 million Teaching, Learning, and Education (TLE) funds must be protected during these admittedly tight budget times. As the University's instructional technology needs change and increase with emergent technologies, it is crucial that these funds be available. The TLE funds provide critical support for MSU to not only stay current within the changing landscape of instructional technology, but to direct the future of information and instructional technologies. Being a leader in technological developments is crucial for MSU to serve as a catalyst for positive intellectual, social, and technological change, as called for both by the University Mission and in the Boldness by Design initiative.
5. **There must be accessibility for people with disabilities.** Section 508 of the 1998 Rehabilitation Act, requiring that federal agencies' electronic and information technology be accessible to people with disabilities, must be implemented in all instructional technology spaces at Michigan State University. The Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the W3C Web Content Accessibility Guidelines should also be considered. Issues of accessibility and usability should be attended to when supporting, funding, and sustaining instructional technology spaces—physical and virtual. Accessibility and usability should be benchmark considerations for instructional technologies.

SPECIFIC RECOMMENDATIONS

Each of the five overarching priorities are addressed, or at least considered, in the specific recommendations that follow.

FACULTY INCENTIVES, TRAINING, AND SUPPORT

General Faculty Support

Training and support for faculty continues to be a critical activity. Current efforts include the Libraries, Computing and Technology Training Program (LCTTP); the Libraries, Computing and Technology (LCT) Faculty Seminar series; the workshops offered by the Instructional Media Center (IMC); and the Virtual University Design and Technology (VUDAT) Breakfast Seminar Series. These efforts help to acclimate faculty to instructional technology tools.

Recommendation 1: Increase commitment to education and training of faculty through workshops, presentations, events, and peer-to-peer activities.

Recommendation 2: Improve the dissemination of information about faculty technology training efforts, including a web portal with information about best practices locally, nationally, and internationally. Examples of best practices models include:

Michigan State VuDAT: Teach Online
http://teachonline.msu.edu/public/pedagogy/online_ped_best_pract/
(Offers a video streamed archive of the Breakfast series.)

Harvard University
<http://icg.harvard.edu/teaching/gallery/index.html>
(Offers a small collection of best practice essays written by faculty members reflecting on their experience teaching with technology.)

University of Maryland
<http://www.umuc.edu/virtualteaching/module1/download.html>
(Offers links to teaching/learning activities with examples of effective technology integration in the classroom.)

St. Petersburg College
<http://www.spcollege.edu/eagle/research/beep/BEEP8.htm>
(Designed as an online newsletter, offers links to sites, essays, reports and diverse articles dealing with best practices nationwide.)

Blended and Online Instruction

Blended and online classes have been a recent focus of activity and development at the University. The Registrar's Office reports that enrollments in online courses specifically have increased 150% over the past four years. Blended course delivery can be an excellent use of physical space, faculty creativity and technology know-how, and electronic networks. When integrated and implemented appropriately, blended classes can create a space for faculty to translate excellent teaching and information-delivery skills to online spaces, and to create student-directed, student-centered spaces for learning that is well-supplemented by classroom instruction.

Recommendation 3: Increase financial and technical support to sustain and develop blended and online courses. Offerings such as those through the Explorations in Instructional Technology Brown Bags, the Lilly Seminar Series, and others should continue to educate faculty about blended and online learning and to encourage faculty development of such courses. Workshops, forums, and other campus-wide discussions are necessary to educate the University community regarding both the promises and drawbacks of blended and online learning. Such educational efforts support faculty, departments, and units as they explore and test blended and online delivery. Support should be provided for those faculty teaching courses that lend themselves well to blended or online delivery. Support might include, for instance, course-release time to develop a durable blended or online course.

Recommendation 4: Continue support of ANGEL and LON-CAPA, and consider other potentially useful courseware. Platform standardization is important, and the University must continue to support ANGEL. At the same time, a standard platform may not support the pedagogical needs of all faculty. Faculty should thus have some flexibility in selecting and implementing alternative courseware (e.g., LON-CAPA) that provides capabilities lacking in the standard courseware platform.

DESIGN AND INFRASTRUCTURE OF INSTRUCTIONAL TECHNOLOGY SPACES

Teaching with technology at MSU takes place in multiple settings—formal and informal spaces, physical and virtual environments. MSU must continue to strive for improvement in its diverse teaching spaces. The design of learning spaces, whether it be a classroom, a laboratory, a library, or an informal learning space—can enhance learning. Excellent learning space design can improve learning outcomes. The converse is also true: Poor design can impede learning and restrict teacher and learner options.

Classrooms

As of January 2006, 216 of MSU's 350 classrooms are equipped with technology carts or laptop podiums. The Registrar's Office reports that scheduling requests for technology classrooms continues to increase. ACNS reports that there are a growing number of log-ins for most of the technology classroom computer stations, indicating increasing use.

Recommendation 5: Maintain and upgrade existing technology classrooms.

Recommendation 6: Continue conversion of non-technology classrooms to technology classrooms and properly maintain existing technology classrooms.

Recommendation 7: Continue classroom design assessment that engages all stakeholders and users. Technology classrooms are regularly assessed regarding faculty need and instructional use; this is especially important as more classrooms support laptop use, wireless capabilities, and changed pedagogical approaches based on these uses and capabilities. Continued assessment approaches should engage all stakeholders and technology classroom users. Such assessment should guide the instructional technology decisions for specific rooms (e.g., whether a laptop podium or computer cart is installed).

Computer Labs

The University maintains approximately 50 public computer laboratories. These labs have and will continue to have—even in the face of rapidly developing communications and computer technologies, the use of laptops, and the use of handheld devices—an

important impact on how instructors teach their classes and what technology-based learning students acquire.

As technology evolves, so does pedagogy, and much teaching is currently guided by active-learning principles that encourage group problem-solving approaches and collaborative work. However, the current design paradigm for most of the University's computer labs does not facilitate the collaborative student work valued in many courses. Specifically, most of the computer labs are arranged in rows, making it difficult for students to move around the rooms, and in many laboratories, unable to work in groups.

Technology trends in the United States also indicate that laptop and wireless use will continue to grow over the coming years. It is important, however, that as we adopt more mobile computing practices we also maintain the wired infrastructure that the University has developed.

Recommendation 8: Create new computer laboratories that accommodate student laptops and other layouts (e.g., pod and cluster designs). As computer labs are added or renovated, different lab designs should be reviewed, considered, and implemented. 214 and 317 Bessey Hall and 26 Student Services serve as examples of labs that accommodate student laptop use. (Such redesigns often also entail reduction of capacity. It is important to increase or at least maintain total lab capacity as labs are redesigned and while lab usage increases.)

Student Work Spaces

On-campus examples of innovative collaborative student work spaces include the first floor of Erickson Hall, renovated by the College of Education. The redesign concept was developed with extensive input from faculty and students. The spaces are designed to capitalize on laptop use and wireless access; the lobby and lower lobby areas have been redesigned to create inviting work environments.

Further, the MSU Library's HiTech Space Committee has been charged with the purpose of establishing a highly networked collaborative environment that combines the library's online and print collections, cutting-edge software and hardware, and an intellectual support structure that includes subject and technology specialists. More physical spaces that facilitate collaborative, flexible, computer-mediated student work are needed.

Recommendation 9: Convert computer labs that are underutilized for teaching to flexible, collaborative, student work environments, involving students in the design process. Robust computers, comfortable, flexible, moveable furniture, wireless access, and whiteboards should be considered in these spaces.

Recommendation 10: Evaluate functional electrical outlets in public spaces and student common areas. Access to functional electrical outlets in public spaces and student common areas should be evaluated to determine if there are enough outlets and if they are easily accessible to laptop users.

WIRELESS ENVIRONMENT

University-provided and supported wireless availability has grown significantly over the last 18 months. As wireless demand and use continues to grow, it is crucial that access, security, and appropriate pedagogical use frame that growth.

Recommendation 11: Continue assessment of security in wireless spaces and across wireless networks.

Recommendation 12: Continue testing of wireless signal strength and coverage.

Recommendation 13: Showcase best practices in innovative instructional uses of wireless. As wireless access becomes more common across campus and as faculty develop innovative uses of wireless in conjunction with their instruction.

INSTRUCTIONAL TECHNOLOGY ACCESSIBILITY AND USABILITY

With the sustained work of the Resource Center for Persons with Disabilities (RCPD), the Writing in Digital Environments (WIDE) Research Center, the Accommodating Technology Committee, and the Usability and Accessibility Center on MSU's campus, accessibility and usability issues continue to be integral to the University's adoption and use of instructional technology. If not accessible and usable, instructional technology—including software, hardware, physical spaces, virtual spaces, and much more—fail to serve the needs of users.

Recommendation 14: Emphasize the importance of accessibility and usability of instructional technology spaces, and support related projects. That the office of the Vice Provost of Libraries, Technology and Computing should play an active role in both emphasizing the importance of and supporting projects related to the accessibility and usability of the University's instructional technology spaces.

INSTRUCTIONAL TECHNOLOGY ASSESSMENT

A variety of units and departments across campus are currently engaged in instructional technology assessment. For instance, Integrative Arts and Humanities, in partnership with a textbook publishing company, is currently exploring instructional technology, particularly course- and content-management use on campus. VUDAT regularly assesses the use and effectiveness of ANGEL by surveying students and faculty using the system. The Department of Writing, Rhetoric, and American Cultures piloted a Wireless Writing Classroom initiative in Fall 2005 and has assessed the instructional impact and sustainability of the initiative. Many other units in the University are undertaking similar efforts.

This information would be useful to chart instructional technology directions at the University if made available through a centralized database. A list of studies and assessment efforts being undertaken would be helpful to ICTC, CCSAC, and to other stakeholders on campus.

Recommendation 15: Gather University data regarding effectiveness of instructional technology and make it broadly available to CCSAC and others.

Recommendation 16: Assess blended and online course delivery across the University, addressing the related pedagogical, technological, and economic issues. As more MSU courses and initiatives rely on blended and online delivery approaches, a University-wide assessment project should be launched to carefully map initiatives across units, colleges, and departments, and to call attention to the economic, technological, pedagogical, issues related to evaluating the best practices of blended and online delivery.

SPECIFIC TLE REQUESTS

Our assessment of the LCT TLE requests focuses only on the requests consistent with these recommendations. LCT TLE requests not cited in this document were not rejected by ICTC; rather, they were considered outside the Committee's purview.

In addition, some TLE requests listed below are more general, recognizing that most instructional technology at MSU relies upon the University's general computing facilities. These facilities must be maintained and updated in a timely manner to provide an adequate infrastructure for the use of instructional technology throughout the University.

Instructional Media Center (IMC)

- Faculty/TA Instruction and Technology Development Room
- 30 Crestron Control Systems
- Portable Video/Data Projectors
- Laptop Computers
- Portable VCR/DVD Players

Broadcasting Services (BCS)

- Upgrades to 1208 and 1220 Engineering Building conference rooms
- Computers for 1208 and 1220 Engineering Building and 145 and 204 Comm Arts and Sciences videoconference rooms
- Improvement to Student Monitors in 145 Communication Arts Building
- Studio A Cyclorama
- Upgrade Final Cut Pro from Ethernet to Fiber Channel

Academic Computing and Network Services (ACNS)

- Server Infrastructure
- Hardware for Computer Labs
- Software for Computer Labs
- Wireless
- Email Storage/CPU Expansion
- Network-Backbone Upgrade

Instructional Technology Support (ITS)

- New Technology Classrooms
- Upgrade/Replace Tech Room Equipment

Libraries

- Public Access Computers
- Electronic Resources