

Task force on Campus-wide Support Needs
for
Technology Mediated Teaching and Learning

Report of Findings and Recommendations

February 5, 2008

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Preface

1. The recommendations that follow are based on the assumption that the Provost is considering *ways to better utilize the University's resources in information and communications technologies for educational purposes*. We thus wish to make recommendations that address a broad spectrum of educational resources, from classrooms and libraries to computers and the Internet.
2. Our recommendations address issues that may have an impact on current governance structures, educational policies, and resource management. A broad program of change cannot be implemented over night. We thus envision a *strategy of successive approximation* toward our ultimate goals, concentrating on change that is both effective and feasible in the here and now. We fully expect a continuing dialog on the principal issue--change management.
3. Modern information technology (IT) does not replace existing educational technologies; rather, it has the potential to transform teaching and learning. Accordingly, we intend our recommendations for the support of "e-learning" to advance our ability to deliver effective education for students both here on campus and elsewhere in the world.

Executive Summary

In August 2007, the Provost created this task force to “determine the types of centralized, campus-wide support needed for technology-mediated teaching” at UNC – Chapel Hill. Specifically, the task force was asked to consider needs related to: Technology infrastructure; Professional development and support for faculty; Services and supports for students; Quality assurance; and, Administrative systems. We formed subcommittees to address each of these issues, and the complete reports and recommendations of each subcommittee are presented at the end of this final report.

Over the course of the four months that this task force worked together, several over-arching findings emerged.

- Adequate study of the e-learning needs of our campus has been conducted over the past several years. Now is the time for campus leadership to begin addressing these needs.
- All learning involves some degree of “e-learning” for today’s students. The administrative and pedagogical dichotomies between on-campus and off-campus instruction must give way to a system that supports blended learning across the full continuum of technology applications and student populations.
- We need new organizational systems to assure better internal communication about and coordination of e-learning resources on this campus.
- We need to examine the operational procedures and funding policies on this campus and assure that they are designed to promote our stated mission and goals.

First, we suggest that there has been adequate study of the e-learning needs of our campus over the past several years and that now is the time for campus leadership to begin addressing these needs. Second, we realized that all learning involves some degree of “e-learning” for today’s students, and that the administrative and pedagogical dichotomies between on-campus and off-campus instruction must give way to a system that supports blended learning across the full continuum of technology applications. It also became apparent through the work of all of our subcommittees that we need new organizational systems to assure better internal communication about and coordination of e-learning resources on this campus. Finally, we found a need to examine the operational procedures and funding policies on this campus and assure that they are designed to promote our stated mission and goals.

Based on the many needs identified by our five subcommittees, we have identified twelve highest-priority recommendations that can and should be acted on immediately.

- 1. Review budgetary and reporting lines for the Teaching and Learning Division of ITS to more closely align them with academic planning for this campus.**
- 2. Initiate steps to provide high speed wired and wireless network access to all parts of the Chapel Hill campus.**
- 3. Authorize a comprehensive review of current campus e-learning resources and expenditures, including both centralized and decentralized units.**
- 4. Develop a planning document that outlines instructional support priorities for the next two years.**
- 5. Continue to develop room and equipment request/assignment processes to ensure that faculty have optimal learning spaces and equipment for their teaching.**
- 6. Initiate planning for a student support unit, parallel to the Center for Faculty Excellence, that will address student needs and interests around e-learning and support student technology initiatives.**
- 7. Address asymmetry between on-campus and off-campus students, and students in different parts of the university in their access to essential e-learning support functions.**
- 8. Expand support for Writing Center and Learning Center services by fall 2008 to include e-learning support for professional and distance students.**
- 9. Launch a competitive instructional innovation grants program that promotes institutional priorities for student learning.**
- 10. Design course evaluation systems that can be adapted to reflect the variety of learning course structures and methods used for instruction by UNC Chapel Hill faculty.**
- 11. Initiate planning for making results of course evaluation data collected by this campus available to all students as an alternative to "Pick-a-Prof" and similar sources.**
- 12. Complete a systematic review of current and potential alternative administrative structures and funding sources for both centralized and decentralized e-learning support systems on this campus.**

Introduction

Background: Task force Charge and Context

During the summer of 2007, Provost Gray-Little created a new task force and invited 18 faculty and staff members, drawn from all parts of the diverse UNC Chapel Hill campus community, to serve on this task force. In her letter to task force members, she noted that

Technology-assisted teaching and learning can be used to improve outcomes and increase effectiveness of residential programs. Further, technology enables and supports effective distance learning to allow wider access to our academic programs. Our distributed approach to the deployment and use of technology in teaching and learning has encouraged the development of innovative and successful programs; however, the use and sophistication of educational technology have grown to the point that greater centralized support is needed to prevent redundancy, encourage collaboration and resource sharing, and contain costs. [emphasis added].

The 18 initial task force members were:

1. Lee McLean (CHAIR), Associate Dean for Allied Health Sciences, School of Medicine
2. Kim Abels, Director, UNC Writing Center
3. Dan Anderson, Professor, English & Comparative Literature
4. Bob Blouin, Dean, School of Pharmacy
5. Linda Carl, Associate Director, Distance Educ & E-learning, Friday Center
6. Jill Fitzgerald, Interim Dean, School of Education
7. Mary George Dental Ecology, Associate Professor, School of Dentistry
8. Claudia Gollop, Associate Professor, School of Information & Library Science
9. Charlie Green, Assistant Vice Chancellor, ITS/ Teaching & Learning
10. Vicki Kowlowitz, Clinical Associate Professor/Director – Center for Instructional Technology & Educational Support, School of Nursing
11. Jason Li, Director, IT, OASIS, CAS
12. Norm Loewenthal, Director, Continuing Education, Friday Center
13. Sarah Michalak, Associate Provost & University Librarian, Libraries/ SILS
14. Jim Noblitt, Research Professor/Director, Foreign language Resource Center, Romance Languages
15. Lisa Norberg, Director of Public Services, Academic Affairs Library
16. Dave Potenziani, Senior Associate Dean, School of Public Health / IT
17. Louise Spieler, Assistant Dean, School of Journalism & Mass Communication
18. Carol Tresolini, Associate Provost for Academic Initiatives, Office of the Provost

The specific charge to this Task force was to: “**determine the types of centralized, campus wide support needed for technology-mediated instruction and learning for both residential and distance students**”, with specific attention to five areas of need:

- Development and maintenance of technology infrastructure (hardware, software, networks)
- Professional development opportunities for faculty to acquire expertise in technology-mediated program/course development and teaching
- Services and support for students who are engaged in technology-mediated learning, whether on campus or at a distance
- Systems to measure, enhance, and ensure quality and cost-effectiveness
- Administrative systems (policies, procedures, personnel, funding models) that support the use of technology in teaching and learning.

We met for the first time on August 24th, and one of our first orders of business was to agree on terminology. While the phrase “*technology-mediated instruction and learning for residential and distance students*” is accurate and descriptive, it is cumbersome. Various shorthand phrases commonly used, such as *distance education* or *educational technology*, suggest a more limited scope of application than our charge. Therefore, we adopted the term “**e-learning**” to encompass the overall scope of our task.

Subcommittees: In order to address the broad charge given to this Task force within the relatively short timeframe of one semester, we decided to form a subcommittee for each major component of the Provost’s charge. The resulting five subcommittees were:

- Technology infrastructure (hardware, software, networks): Dave Potenziani, Vicki Kowlowitz, Lisa Norberg
- Services , supports and professional development opportunities for faculty: Carol Tresolini, Charlie Green, Jim Noblitt, Claudia Gollop,
- Services and supports for students (on and off-campus): Kim Abels, Norm Loewenthal, Dan Anderson, Jason Li , Amos Esplenade, Erin Branch
- Systems to assure quality and cost effectiveness : Linda Carl , Louise Spieler, Mary George
- Administrative systems (policies, procedures, personnel, funding models): Bob Blouin, Jill Fitzgerald, Lee McLean

Finally, at that first meeting, we discussed the need for a student voice on the Task force, particularly in the subcommittee charged with recommendations related to needed services and supports for students. For that purpose, we recruited two additional members to serve on this subcommittee:

Erin Branch – Graduate Student in English and Comparative Literature

Amos Espelade- Undergraduate Student in Philosophy

A complete roster, showing contact information, for the 20 members who worked on this task force is presented in Appendix A.

Timeframe

The E-Learning Task force held 9 meetings between August 24 and December 7, 2007. In addition, each of the subcommittees met at various times to discuss their reports. The work of this task force was informed by the reports of two recent reports commissioned by the Provost:

Report of the Distance Education Task force; February 16, 2007 (see Appendix B)

Final Report: Strategic Planning Committee for Information Technology-May 2007 (See Appendix C for on Education and Learning subcommittee report).

The deliberations and recommendations of our task force clearly build upon and draw heavily from the conclusions and recommendations contained in these earlier reports, supplemented by information and perspectives contributed by task force members. The goal for this task force was to provide timely recommendations based on these recent reports. However, during this same brief 3 ½ month time frame, the Provost's office was moving forward on several critical decisions with significant implications for the future of e-learning on the Chapel Hill campus. One of these processes was the search for a new Chief Information Officer (CIO) for the campus¹. We recognized that the new CIO, once identified, would likely have specific plans or priorities that may or may not be consistent with this task force's recommendations.

Perhaps even more daunting was the fact that this task force was also working in the shadow of the campus' massive Enterprise Resource Planning (ERP) project, a five year project (2005 – 2010) that will ultimately have significant impact upon future e-learning resources and functionalities on this campus (<http://its.unc.edu/erp/>). This concurrent planning presented some important opportunities for having input to campus information technology decisions that will impact e-learning. A prime example of this was the Provost's request, issued at our first meeting, for prompt feedback on a recent ITS recommendation the campus should begin a process of moving from the currently used proprietary Course Management System, Blackboard®, to an open source alternative – specifically *Sakai*. We devoted considerable time and attention to this question, finally reaching consensus on a qualified recommendation to move forward with this plan. (See copy of 10/12/07 Task Force memo to John Oberlin, Interim CIO, in Appendix D).

While the ongoing ERP planning process made the work of our task force especially timely, it also presented some serious limitations on the recommendations that we could offer. For example, the current ERP-necessitated moratorium on new software purchases or web design conflicts with the strong recommendation of this task force that we should not wait 2 or 3 years to update key components of the e-learning systems on this campus. Thus, again, we recognize that some our recommendations may be contra-indicated by the ERP initiative and implementation timeframe. With these caveats, we offer the following observations and recommendations and for the Provost's consideration.

¹ In December, the Provost announced that Larry Conrad (currently at Florida State University) will become our new Chief Information Officer, effective February 1, 2008.

Core Assumptions and Principles

During initial meetings, our task force discussed and confirmed a number of principles that would guide all of our recommendations. These principles have been well-articulated and supported in previous reports, especially the ITS Strategic Plan for Teaching and Learning and the Distance Education Task force Report. The following summarize these guiding principles:

Primacy of teaching-learning goals: Pedagogical considerations and priorities of the campus Academic Plan must be the driving factor in decisions regarding where, when, and how we use instructional technology; that is, our technology must support and accommodate our pedagogy, not vice versa!

- ***Essential Functions of Instructional Technology for the Future:*** While infrastructure and hardware are essential, they are not sufficient. Software and informed users of that software create and support the work we do. Informed users and software will allow us to realize our academic priorities as described in the 2003 Academic Plan. Adoption of all technologies for teaching and learning should be intimately linked to pedagogy and provide features that facilitate and support:

- ✓ Communication and collaboration among faculty, students, off-campus communities, and international experts, including partnerships with the three other Triangle universities, the UNC system campuses, and the Research Triangle Park;
- ✓ Preparation of faculty and students to compete successfully in a global economy and participate constructively in increasingly diverse societies;
- ✓ Access to a wide-scope of resources, with ability to search and save information;
- ✓ Active learning which encourages critical and creative thinking;
- ✓ Situated experience and reflection (e.g., real-life experiences, apprentice-like activities, simulations) which are acknowledged as necessary for learning, transfer of learning, and development of expertise (John D. Bransford, Ann L. Brown, and Rodney R. Cocking (Eds.) *How People Learn: Brain, Mind, Experience and School*, 1999);
- ✓ Interdisciplinary research and teaching addressing issues which span multiple disciplines within and outside of the course context (K-12 education, civil rights, health care access, community preparedness, environment and sustainability);
- ✓ Building continuity across classes (i.e. students able to archive classes, search and retrieve materials, bookmark content; create e-portfolios, etc.);
- ✓ Provision of timely and effective feedback;
- ✓ Ability to accommodate students' diverse levels and learning styles; and
- ✓ Ability to easily capture, share, archive, and re-use instructional documents and learning objects

Major Findings

Each of the five Task force subcommittees collected data, reviewed relevant sections of previous committee and task force reports, and developed a subcommittee report with specific recommendations based on these findings. These more detailed reports and recommendations are presented in the next section of this report. However, as the full task force met and discussed our individual subcommittee findings over the course of the fall semester, several common issues, and associated recommendations emerged that cut across all of the topics.

It is time to act!

The task force reviewed documents and reports prepared by its predecessors, including: the *Faculty Information Technology Advisory Committee, Annual Reports to the Faculty, 2000 through 2004*; the *Report of the Distance Education Task force* (February, 2007), the Assessment Policy Advisory Committee (APAC) report , *Recommendations to the Executive Vice Chancellor and Provost Concerning Resources for Assessment* (June, 2006), the *Strategic Planning Committee for Information Technology Final Report* (May, 2007), *The Final Report of the Faculty Development Initiative Planning Committee* (May, 2007); and the *Learning Management System Study: A Review and Recommendation* (September 2007). In addition, we reviewed the university's *Academic Plan* (July, 2003). In general, and in most specifics, the current task force members found the issues and recommendations identified in these earlier reports to be well-founded, appropriate, and still highly relevant.

The subcommittee reports that follow refer to these earlier documents and support implementation of several of the recommendations already made by previous committees. **The Task force suggests that there has been sufficient study of these issues, and that it is time for action.** Of course, the argument may be made that further action should be delayed until the Enterprise Resource Planning has been completed, or until the new Chief Information Officer is on board and has had time to complete his own studies of these issues. However, the campus is already significantly behind many of its national peers in its use of and support for e-learning – a factor increasingly apparent to potential students and faculty. Further, it must be recognized that the one constant in the realm of information and instructional technology is change, and there will always be some change in key personnel or campus administrative planning that could be seen as a reason to delay action. Indeed, a major theme in the recommendations that follow is the need to increase our campus' capacity for systemic and proactive **change management**. The temptation to wait for all changes to be completed before taking action on these recommendations will inevitably result in the campus falling further and further behind our peer institutions. However, the power of inertia cannot be overestimated – especially in an institution like UNC-Chapel Hill, with our vast size, multi-faceted mission and long-standing traditions. Overcoming institutional inertia will require strong, goal-directed leadership from the highest levels of campus administration, including the Provost.

Increasingly, all learning involves “e-learning”

It is difficult to imagine any formal, university-sponsored teaching-learning activities today that are not, to varying degrees, dependent upon and supported by our campus instructional technology. Students of all ages today expect, and increasingly in the future will expect, educational content to be available in multiple, digital formats and accessible in remote as well as traditional classroom venues. Many of our current campus and UNC system policies

maintain an outdated dichotomy between “on-campus” and “off-campus” instruction that is manifest in differential policies and resources for the support of teaching and learning involving students designated as “on-campus” versus “off-campus”. The historical bases for some of these differential policies no longer seem relevant, in this age of multi-tasking, life-long learning, and cyber-communications. **As the UNC system’s flagship university, the campus should take a leadership role in advocating for a system-wide review of funding policies to determine whether these are consistent with today’s educational realities.**

Need for Better Internal Communication

Policies and procedures are needed that will ensure ongoing, two-way communication between the various stakeholder groups involved in e-learning, including students, faculty, academic planners and administrators, and IT planners, administrators and support personnel, at both the local and central level. Currently, like many universities, we have a crazy quilt of offices, committees, and interest groups whose inter-communication is, at best, haphazard. To effectively manage change and assure the most cost-effective use of our campus resources, **we must develop an organizational structure that assures effective, continuous communication among all of these groups.**

Need for Better Coordination of E-learning Resources

Policies and procedures are needed that will ensure effective coordination of e-learning resources and initiatives on this campus to maximize the pedagogical benefits for all participants in the UNC community of learners. Currently, we have a largely de-centralized system that has evolved in response to idiosyncratic forces and opportunities specific to individual schools and centers on campus. The extent to which these resources and initiatives are coordinated among schools and between individual schools and central campus, IT seems largely dependent on chance encounters and interpersonal relationships. **If our goal is to assure that we are making the most cost-effective use of our campus’ e-learning resources, we cannot leave the sharing and coordination of these resources up to chance.**

Need for Internal Consistency

It seems obvious that our operational policies and procedures should be consistent with our stated values and mission. However, our subcommittees identified several areas in which current university policies are not totally consistent with the goals articulated in our Academic Plan or campus Mission Statement. The prior documents confirm our campus’ commitment to high quality teaching and to meeting the state’s needs for a well educated citizenry and professional workforce. However, current funding policies, as well as those governing promotion and tenure, do not provide effective incentives (and sometimes serve as disincentives) for faculty efforts to achieve the educational goals. **There is a need to carefully examine the operational procedures and funding policies on this campus and assure that they are designed to promote our stated mission and goals.**

Need for (Slightly) More Centralization

Our task force subcommittees all found the need to recommend some degree of centralization of core support services and policies to achieve the Provost’s goal of maximizing the educational impact of campus investments in e-learning technology. At a minimum, we need centralized mechanisms for assuring the types of communication, coordination, and internal

consistency noted above. There are also very real cost efficiencies in centralization of some services and infrastructure design decisions. However, the campus has a long history of great success operating on a very decentralized model. Any plan to increase centralization of key e-learning resources and policies must involve open communication with all constituencies to assure that any resulting restructuring and/or reallocation of resources provides increased benefits and opportunities for all participants. **With these caveats stated, and assuming implementation of systems to assure ongoing communication and coordination, we must conclude that it is time for the Provost to centralize certain core e-learning resources.**

High Priority Recommendations for Immediate Action

Each of the individual subcommittee reports that follow contain a number of specific recommendations, all of which have been discussed and supported by the full Task force. It is our hope and expectation that all recommendations can be achieved within the next three to five years. After comparing and discussing our respective subcommittee recommendations, we have identified the following twelve recommendations as the most urgent. Thus, we are specifically recommending that the Provost initiate action before the end of 2008 on each of the following recommendations. Further information about each recommendation can be found in the report of the specific subcommittee (identified in parentheses.)

1. Engage the new CIO in a review of the Task force report and, most specifically, the budgetary and reporting lines for the Teaching and Learning Division of ITS, to more closely align them with academic planning for this campus. (*Faculty Development and Support and Administrative Systems* subcommittees)
2. Initiate steps to provide high speed wired and wireless network access to all parts of the Chapel Hill campus (with possible exclusion of those health affairs areas with “firewalls” to protect confidential patient information). (*Technology Infrastructure and Student Supports and Services* subcommittees)
3. Authorize a comprehensive review of current campus e-learning resources and expenditures, including both centralized and decentralized units. (*Administrative Systems subcommittee*)
4. Identify instructional support priorities for the next two years. A clear, written plan is needed that specifies a variety of core software tools, in addition to the campus Course Management System, for which the campus will provide centralized support, (e.g., videoconferencing, e-porttask forceolios, digital repository). This document should also specify plans for related faculty development and support priorities over the next two years. Development of this plan will require the involvement of the Associate Provost for Academic Initiatives, the Director of the Center for Faculty Excellence, the Chief Information Officer (CIO), the ITS Assistant Vice-Chancellor for Teaching Learning and the University Librarian, in consultation with key campus stakeholders, including both graduate and undergraduate students. (*Faculty Development and Support and Technology Infrastructure subcommittees*)
5. The Registrar, in partnership with ITS/T&L Division and the new Center for Faculty Excellence should continue to develop room and equipment request and assignment processes to ensure that faculty have optimal learning spaces and equipment for their

teaching. This involves meeting current needs and continually monitoring faculty desires across campus to understand their evolving needs and encourage their input into creating new learning spaces. (*Technology Infrastructure subcommittee*)

6. Initiate planning for a student support unit, parallel to the Center for Faculty Excellence, that will address student needs and interests around e-learning and support student technology initiatives. A first step in this planning will be to conduct a survey of all student constituencies (including on- and off-campus; graduate and undergraduate) during the 2008-9 academic year. This survey should be designed to identify e-learning demands and desired support in order to identify needed features to be incorporated into a centralized, expanded e-learning training and resource center for students. (*Student Supports and Services subcommittee*)
7. Create a committee of students, faculty, existing unit-level IT support services, and ITS by fall 2008 to develop a time-targeted, resourced plan to remedy existing asymmetry in students' access to essential e-learning support functions (*Student Supports and Services subcommittee*).
8. Expand support for Writing Center and Learning Center services by fall 2008 to include e-learning support for professional and distance students. (*Student Supports and Services subcommittee*)
9. Launch a competitive instructional innovation grants program that promotes institutional priorities for student learning. This program should be administered through the new Center for Faculty Excellence with a recommended funding level of \$500,000 per year. (*Faculty Development and Supports subcommittee*)
10. Expand the charge to the Office of Institutional Research and Assessment (OIRA) and the campus Assessment Policy Advisory Committee (APAC) to assure that their current learning outcomes and on-line course evaluation projects result in evaluation systems that can be adapted to reflect the variety of learning course structures and methods used for instruction by UNC Chapel Hill faculty. (*Quality Assurance subcommittee*)
11. Initiate planning for making results of course evaluation data collected by this campus available to all students as an alternative to "Pick-a-Prof" and similar sources. (*Quality Assurance subcommittee*)
12. Engage an appropriately qualified organizational consultant to complete a systematic review of current and potential alternative administrative structures and funding sources for both centralized and decentralized e-learning support systems on this campus. (*Administrative Systems subcommittee*)

More detailed explanations of the recommendations, including estimated costs as appropriate, are provided in the subcommittee reports. It should be emphasized that we have identified the subset of twelve recommendations for immediate action primarily because they are logical first steps that will allow subsequent action on the remaining recommendations. Ultimately, if this campus is to become the nation's leading public university, we believe that all of the recommendations included in these reports must be addressed.

Specific Findings and Detailed Recommendations

(Subcommittee Reports)

Technology Infrastructure Subcommittee

Dave Potenziani, Vicki Kowlowitz, Lisa Norberg

A. Introduction

1. Scope

The Technology Infrastructure Subcommittee examined the current state of information technology support on campus and reviewed what infrastructure, including hardware, software, and networks should be centralized and given campus-wide support to facilitate technology-mediated teaching and learning for both residential and distance students.

2. Assumptions and Values

- Adoption of all technologies for teaching and learning should be driven by pedagogy to fulfill the objectives of the UNC Academic Plan.
- The technology infrastructure should be thought of as context as well as a set of tools.
- In relation to network connectivity, people generally need and want more, everywhere, all the time.
- While infrastructure and hardware tools are essential, they are not sufficient. It's software that makes everything pedagogically useful and supports getting things done.
- Classrooms should be inherently learning spaces that also allow the university to leverage the technical environment with ubiquitous, synchronous communications access of high-bandwidth technology.
- It is imperative that faculty and students have input into the IT decision-making process.

3. Findings

- The UNC IT network lacks sufficient wired and wireless access on campus.
- There is no single data communications system to support portable communication devices (e.g. Treo, Blackberry, iPhone).
- IT-enabled classrooms are highly decentralized. Those managed by Information Technology Services (ITS) follow a standard model that is inflexible and expensive to maintain and does not necessarily support critical pedagogy.
- The University is heavily invested and over reliant on the CCI / Lenovo hardware solution.
- Campus-wide IT decisions are often made without sufficient input from faculty and students.

- Many of the recommendations outlined in the ITS Strategic Plan have not been implemented.

B. Specific Recommendations

1. **Barrier Free Communications & Networking**—Ensure ubiquitous access to wired and wireless networks, including telecommunications networks (cell phones), the commodity Internet and the research networks. In short, finish building the campus network.
 - a. ITS should be responsible for managing the network with input from and in consultation with faculty, students, research centers and organizations, and other key stakeholders.
 - b. Timeframe/Priority—the campus should commit to a specific time frame to achieve ubiquitous network connectivity, perhaps three years. Because so many other recommendations build on the network foundation, it is the highest priority.
2. **An ONYEN that is the Only Name You'll Ever Need**—Establish seamless/single-sign-on authentication and access to all relevant resources, including inter-institutional access, using open source solutions such as Shibboleth. The system should be responsive to user needs, utilizing a user-centered identity management that allows the individual to determine how to identify them and communicate with them.
 - a. ITS should be responsible for seeking input from and working with the Registrar, the Libraries, the Friday Center, and other key stakeholders that require standard login for access to services and resources.
 - b. Timeframe/Priority—A ubiquitous ONYEN matches the need for completing the network infrastructure. It forms the basis of serving the widest array of users and prepares the way for a number of consequent capabilities. Work should begin immediately and be completed within 12 months.
3. **Collaborative Learning**—Develop the infrastructure (including hardware and software) that provides high quality synchronous communications access of high-bandwidth technology needed to support videoconferencing, interactive tools, and other emerging technologies with educational potential, such as virtual environments (Second Life) and massive multiplayer online games. These hold the promise of supporting web-based interactive technologies that facilitate active learning, critical thinking, and collaborative learning (videoconferencing tools, wikis, blogs, etc.).
 - a. ITS should be responsible for seeking input from and working in consultation with key stakeholders, including students, faculty, and deans supporting these types of approaches.
 - b. Timeframe/Priority—The campus should have a standard web conferencing capability in Fall 2008. Other new technologies (Web 2.0 systems and the like) for achieving this goal should be evaluated annually by ITS.
4. **Beyond the CCI**—Explore alternative models of student and faculty technology beyond the CCI. The advent of smaller, portable technologies offer a wide array of possibilities.

- a. ITS and the UNC Center for Faculty Excellence should be responsible for seeking input from key stakeholders regarding current campus-wide e-learning technology support needs and work in consultation with these stakeholders to provide this support
 - b. Timeframe/Priority—Identify and deploy supplementary technologies to the CCI (e.g. podcasting and e-portask forceolios) for Fall 2008. Other new technologies for achieving this goal should be evaluated annually by ITS.
5. **Think before we leap**—Conduct an assessment of faculty needs for course management systems and evaluate a suite of open source course management tools that facilitate the pedagogical goals of students and faculty, including the orientation and training needs of both groups.
 - a. ITS should actively seek input from faculty and students regarding the needed capabilities of a campus-wide course management system and work in consultation with these key stakeholders throughout the design and implementation of this system.
 - b. Timeframe/Priority—Provide specific goals by December 2008.
6. **Map the path**—Develop a migration path for all course materials to the next course management system providing faculty with sufficient support and training for a smooth transition including pilot testing and prototype develop.
 - a. ITS should be responsible for seeking input from and in consultation with faculty, students, research centers and organizations, and other key stakeholders.
 - b. Timeframe/Priority—Contingent upon completing the needs assessment in #5 above, the migration plan will be completed within 6 months.
7. **Finish the job**—Implement the migration plan to move course materials to the new system.
 - a. ITS will be responsible for providing tools to move data to the new system and will provide support to faculty.
 - b. Timeframe/Priority—Contingent upon the completion of #6 above, the new system will be fully implemented at the beginning of the next academic year.
8. **Capture & Deliver**—Continue to provide the resources (hardware, software, and staffing) needed to develop and support an institutional repository to ensure the capture and re-use of the institutions' intellectual capital—including experiences in the classrooms, especially facilitating faculty and student access of resources outside of the usual course structure.
 - a. The University Libraries should be responsible for seeking input from and in consultation with the UNC Center for Faculty Excellence , students, research centers and organizations, ITS, and other key stakeholders.
 - b. Timeframe/Priority—Roll out the initial system for Fall 2008 with enhancements in each of the succeeding semesters to serve the entire campus within 3 years.

9. **Optimizing Learning Spaces**—Continue to develop room and equipment request and assignment processes to ensure that faculty have optimal learning spaces for their teaching. This involves meeting current needs and continually monitoring faculty teaching methods and needs across campus to understand how these needs evolve.
 - a. The Registrar, in partnership with ITS and the new UNC Center for Faculty Excellence, should identify these needs; and Registrar, in partnership with ITS, should be responsible for implementing the approach.
 - b. Timeframe/Priority—Develop specific plans by May 2008 and begin deployment of the system in Fall 2009.

10. **Classrooms for the Future**—Begin development of hybrid classrooms by creating a handful of prototype classroom spaces that enable “natural” videoconferencing – blending of on-campus and off-campus participants, and can be used as a laboratory for incorporating various instructional strategies into the learning environment. Ideally, the spaces should be flexible learning environments that accommodate all forms of instruction that range from didactic presentations, which can include high interaction and Socratic dialogues, to small group work.
 - a. ITS should create a pilot program to develop and test three spaces that range from large lectures, small group work, and individual interactions. In consultation with the UNC Faculty Center of Excellence, create a development process to continue investigation and evolution of these spaces.
 - b. Timeframe/Priority—summer 2008 with first use in August.

11. **Inclusive Decision-making** - Establish a campus level IT Governance Structure for decision-making and accountability that includes all stakeholders, as recommended in the IT Strategic Plan Recommendations.
 - a. The new CIO should be responsible with input from and in consultation with ITS senior staff members, faculty, students, research centers and organizations, and other key stakeholders.
 - b. Timeframe/Priority—Immediate.

Faculty Support and Development Subcommittee

Carol Tresolini, Charlie Green, Jim Noblitt, Claudia Gollop

Instructional technology at a crossroads: Professional development opportunities and technology-mediated teaching strategies at UNC

Introduction

Faculty members interested in learning how to implement technology-mediated learning strategies have access to a rich variety of professional development opportunities on campus. In addition to the internal support offered within many academic units, a wide range of services are provided by centralized organizations, such as the Libraries, Center for Teaching and Learning (to be incorporated in the new Center for Faculty Excellence), the Office of Institutional Research, and ITS-Teaching and Learning. The attached services matrix (see Appendix A) outlines the broad service categories available through these central providers and the academic units.

The scheduled creation of the new Center for Faculty Excellence in 2008, the new center's proposed relocation to Davis Library, and the recent realignment of central IT under the Office of the Provost make this an ideal time to reconsider faculty development models for instructional innovation. What professional development models will best serve the teaching and learning mission at Carolina for the next 5-10 years?

During its discussions, the Committee has operated under the following assumptions:

- Professional development models should serve clearly-articulated instructional priorities for both individual faculty members and the institution
- Faculty would benefit from improved coordination of central support resources
- Unnecessary redundancies between central and decentralized support agencies should be minimized
- Instructors and students benefit when information about instructional innovation is effectively disseminated across campus
- Academic units interested in addressing curricular challenges and promoting instructional innovation should have access to the appropriate incentives and support

As part of its suggestions for improving faculty development opportunities for technology-mediated instruction, the Committee offers the following findings and recommendations:

Revisiting professional development models

Findings

Underutilized professional development programs and support for technology use that is not pedagogically grounded represent a questionable use of a finite resource. There is little

evidence to date that technology-mediated learning strategies as they are currently implemented at this University have had a significant impact on student learning.

While many of the traditional professional development strategies used to support effective instructional technology use at the University will continue to play an important role, increased emphasis needs to be placed on faculty development models that 1) align closely with the instructional goals and priorities of the institution, 2) are capable of supporting initiatives that have a significant impact on student learning, 3) effectively leverage campus technology investments, and 4) promote technology use within the context of sound pedagogical principles and measurable learning outcomes.

Recommendations

- The Associate Provost for Academic Initiatives, the Director of the Center for Faculty Excellence, the ITS Assistant Vice-Chancellor for Teaching Learning and the University Librarian, should oversee the creation of a brief planning document that outlines instructional support priorities for the next 2-3 years. The document should be developed in consultation with key campus stakeholders and in reference to relevant campus strategic planning documents, and should be presented to the Provost no later than February 2, 2009.
- All central organizations providing instructional support should jointly explore new and emerging professional development models and implement them where appropriate.

Improved coordination of central support resources

Findings

One of the primary principles guiding the development of the new Center for Faculty Excellence is ensuring that faculty access to needed resources is as transparent as possible. Central support for teaching and learning at the University is provided by a number of organizations. Historically, these units have operated under separate reporting structures and have had few incentives to collaborate closely, making sustained service collaboration awkward. Bringing expertise together under easily-accessible support structures would improve the overall quality of faculty development on campus. The Administration must follow through with creative staffing and reporting structures to ensure an adequate degree of integration.

Recommendations

- The Center for Faculty Excellence should serve as the primary interface for faculty members seeking support for instructional endeavors. The new center would link faculty to the Library's instructional services, and those of ITS-TL, which continue to provide primary support for the University's learning infrastructure. In order to effectively leverage services across separate central units, the Director of the Center for Faculty Excellence, the Assistant Vice Chancellor for ITS-Teaching and Learning and the University Librarian must establish and maintain close working relationships. All unit heads should meet monthly with the Associate Provost for Academic Initiatives.
- The Provost, in consultation with the CIO, should consider a revised reporting structure for ITS units whose services focus primarily on instructional support. The goal should be

to more closely align key teaching and learning functions, such as instructional technology and classroom support, with the Center for Faculty Excellence.

- The ITS Assistant Vice-Chancellor for Teaching and Learning, in consultation with the Director of the Center for Faculty Excellence, should select ITS-TL employees to work on site with the new center. Depending on the success of this model, the Center Director, in consultation with the Provost, should consider approaching the Library and other instructional support organizations about similar arrangements.
- The University should identify funding for the renovation of space identified in Davis Library to house the new Center for Faculty Excellence.

Minimizing redundancies

Findings

It would be unwise to make generalizations about the roles of departmental support operations, as individual schools and disciplines will always have special needs and cultures not shared by the rest of the University. Some academic units have compelling reasons to continue to fund their own internal support organizations.

That said, some academic units may be interested in having a coordinated central agency play a greater role in their academic support efforts. Those that are not staffed to provide high-quality instructional support internally may be well-served by crafting service agreements with appropriate central providers.

Recommendations

- The Provost should approach academic units that may be better served by a strong central instructional support unit about realignment of roles and resources.
- In order to ensure that the needs of academic units are addressed, units interested in leveraging the central model will enter into formal, possibly contractual, agreements with appropriate central service providers.

Disseminating instructional innovation

Findings

Instructional innovations at UNC thrive largely in isolation; few are disseminated outside their departments of origin, and many more are known only to individual instructors. On a large research campus, efforts to build institutional knowledge across academic units and disciplines require more formal structures than currently exist at the University. Currently, there are few mechanisms in place to gather information about instructional initiatives within departments.

The University would benefit by ensuring that lessons learned about instructional innovation can be leveraged across the institution. Benefits to academic units would include 1) more timely information about central services, 2) greater access to potential central project partners and

resources, 3) a broader platform for disseminating departmental ideas and successes and 4) new opportunities for inter-disciplinary collaboration.

Recommendations

- The Director of the Center for Faculty Excellence and the Assistant Vice Chancellor for ITS-Teaching and Learning, will work together to establish formal mechanisms to promote formal dissemination and collaboration efforts across academic units.
- The Director of the Center for Faculty Excellence and the Assistant Vice Chancellor for ITS-Teaching and Learning will report quarterly to the Office of the Provost on findings gleaned from the dissemination and collaboration program.
- The Center for Faculty Excellence, in partnership with the Library, ITS-TL and other instructional support providers, will craft a communications plan for disseminating information about instructional initiatives.

Innovation support

Findings

In their ongoing efforts to improve the quality of undergraduate programs, schools and departments must also work to address their respective academic challenges. Examples include long waiting lists for core courses, minority student achievement and student engagement in large-enrollment courses. Technology-mediated strategies will have an important role to play in meeting these challenges.

Few academic units have the resources to address large-scale curricular issues on their own. Likewise, few individual faculty members have the time and professional incentives to pursue external grants opportunities that emphasize instructional improvement. Planning for and implementing innovative instructional models requires institutional investments to pay for faculty release time, digital content development, etc.

Recommendations

- The Center for Faculty Excellence should seek \$500K in annual funding to administer a competitive instructional innovation grants program that promotes institutional priorities for student learning.

Appendix A

Instructional Technology Support Roles and Providers

	Departments, Schools	Office of Inst Research and Assessment	CTL	ITS	Libraries
Campus wide course evaluation system		X		X	
Classroom facilities design and management	X			X	
Course evaluation	X	X			
Curricular redesign initiation and implementation	X				
Curricular redesign project management and support	X	X	X	X	
Other curricular development programs	X		X		
Desktop support	X				
Enterprise learning applications administration and support	X			X	X
Equipment loan	X				X
Facilities for multimedia project production (course-related)	X		X		X
Faculty development (pedagogy, course-related, and instructional technology)	X		X	X	X
Learning content production (instructional design, graphic/multimedia design and production)	X		X	X	X
Learning outcomes assessment	X	X	X	X	
Learning technologies evaluation and selection	X		X	X	X
Learning technologies project management	X			X	

	Departments, Schools	Office of Inst Research and Assessment	CTL	ITS	Libraries
Library resource instruction for faculty and students					X
Sponsorship of campus wide events, publications, interest groups, workshops, other programs	X		X	X	X
Access to subject matter expertise	X				
Supplementary resource collection	X				X
Teaching assistant development	X		X		

Student Services and Supports Subcommittee

Kim Abels, Norm Loewenthal, Dan Anderson, Jason Li , Amos Esplenade, Erin Branch

Scope

We took as our scope both existing student services and supports and imagined services and supports. In doing so, we considered several arenas of student e-learning activity and need: academic, personal and communal.

Academic	Personal	Communal
Writing/learning supports Advising Virtual and physical classroom settings Software application access and training Library access/services	Service hours Scheduling/calendars Parking Tech support Access to hardware/software Administrative tasks	Group work spaces (blogs, wikis) Communication spaces (email, Facebook, virtual worlds) Service learning opportunities

Assumptions

As described in existing, recent reports on UNC e-learning issues (IT Strategic Plan, DE report, Distance Education Steering Committee CENTSS audit, Sakai info and FITAC report) pedagogy and learning outcomes should drive decisions about technology for students. Accordingly, the committee endorses a list of teaching/learning features that should characterize instruction, supports, and services for students. This list includes learning opportunities that are:

- Characterized by high quality
- Based on critical-thinking
 - Inquiry-based
 - Knowledge created by students
- Collaborative
 - Among students
 - Between students and instructors
- Activity-focused
 - Interactive
 - Extend beyond content-delivery
- Interdisciplinary
- Communal
 - Involve engagement/service at local, state, national, or international levels

We see these features as involving IT, but within the larger frame of teaching and learning issues. Technology serves as equipment; people and pedagogy turn interactions with this equipment into learning. **Accordingly, we assume that the human infrastructure is as vital as the software and hardware in our discussions. Students need more than equipment. They need teachers and support providers who understand how learning happens in digital environments.**

Findings

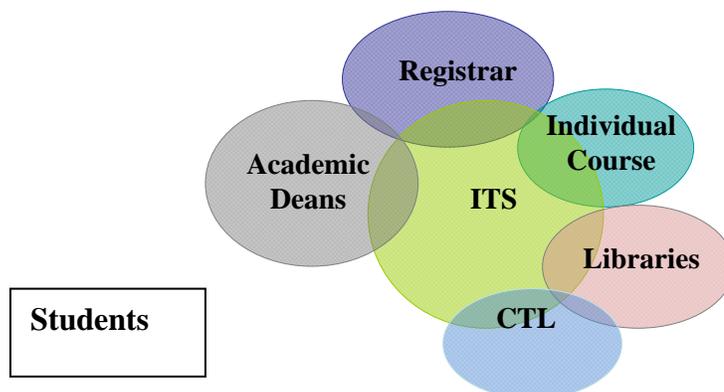
Four broad needs emerged that cross student support and service offerings throughout our residential and virtual campus. We find that current e-learning supports for students are not centralized and not sufficient. These issues recurred throughout our discussion of student e-learning support:

- 1. Need for a central structure to channel, coordinate, and recommend action around student e-learning needs**
- 2. Need for a central physical location for students to receive e-learning support**
- 3. Need for all learning environments and supports to be accessible to any student—regardless of the student’s location**
- 4. Need for student support access and tool improvements that would strengthen learning opportunities**

1.) New Structure for Student E-Learning Support

Students have centralized e-learning needs in a de-centralized administrative and funding environment. While the decision-making silos of academic deans, ITS, the libraries, and, soon, the Center for Faculty Excellence make strategic decisions about e-learning environments which need support, students and academic support units have limited channels for conveying e-learning experiences, interests, and needs. As recent YouTube videos (<http://www.youtube.com/watch?v=6gmp4nk0EOE>) and articles such as “The Death of Email” (<http://www.slate.com/id/2177969/>) underscore, the e-learning landscape is changing fast. Students’ learning practices and perspectives should guide decision-making at administrative and funding levels.

The existing de-centralized environment may look something like this diagram:



It is unclear, given the current picture, how or where students (or units that provide academic support outside of these circles) can effectively communicate about or seek support for e-learning needs. Students interface with e-learning supports or services either directly through specific services provided by ITS, through webpages or Internet resources they discover, or, sometimes, through interaction with an individual faculty member who uses technology in his or her course. Interfacing with ITS occurs primarily via CCI distribution/software package or help.unc.edu--if students are one of the 14,000 on-campus undergraduates. For other students

(8000+ graduate, professional, and continuing students) their e-learning interaction may funnel through a Blackboard page, help.unc.edu, phone, or occasionally, individual learning services or supports devised by or provided by an individual program or faculty member. Students have no recognizable mechanism to express their e-learning needs or communicate to a central authority. Students may incidentally be called upon (as students were in the formation of this committee) to participate in a focus-group, occasional student government initiatives (e.g. demand for music downloads), course evaluations (that may not take e-learning issues into account) or offer complaints to help.unc.edu or individual programs. If students are communicating via these disparate channels, no mechanism is available to acknowledge, digest, collect, or report these issues systematically across units to decision-makers. Lack of a collection point leads to costly, redundant, and uneven solutions for students and programs across campus as individual units devise local responses.

Recommendations:

- **Ensure that students have a stable, sustainable channel through which to express their needs and interests around e-learning decisions and investments.** Fully imagined, this structure could be a partner or parallel unit to the Center for Faculty Excellence and take the form of the “Center for Student Excellence” or a “Center for Student Support, Technology, and Initiative”. Such a center might be staffed to coordinate resources and shared interests across campus, represent and advocate for student e-learning needs to other centralized units and disseminate e-learning efforts to students. An advisory board of students, related staff, and faculty could guide the work of this unit. As happens for faculty, staff could co-ordinate planned instruction by the library at Davis, in IT units in re-purposed labs, and other tech locations (MRC, OASIS) around campus. Creation of such a center would provide a clear point of contact for students, a channel for communication in and around the University, and a structure focused on students e-learning needs through which centralized support could flow and be administered. This center would require administrative staff, clerical support, and appropriate infrastructure. (\$250K)

2.) Central Location for E-learning Student Support

Students need e-learning support beyond the tip sheets available on help.unc.edu and the computer fix-it shop in the basement of the Undergraduate library. Propelled by course assignments and personal interests in technology as a learning tool, students seek support in these areas:

- Increased access to multi-media tools (equipment use or rental)
- Temporary access to software beyond the CCI download
- Point-of-need, individual training around software or hardware (increasingly required for coursework)

Some of these supports currently exist, but they are hard to find and not in adequate supply. A quick, real student experience illustrates the need: Groups of students in a Political Science class are assigned to make movies as a course requirement. The faculty directs them to seek support from three possible places: the Beasley Center, the Media Resource room in the library or, maybe, the Journalism school. The students find the Beasley Center swamped, move on to the Media Resource room where they discover that they can't check out cameras, and, as a last

resort, consider looking for a Journalism major in their residence hall who might have permission to use some of the equipment potentially available there. Once equipment is found, the students then sleuth again to seek the editing software/equipment necessary to complete the project. It is assumed that they will figure out how to use the equipment and develop an effective movie with the equipment. While this is one scenario, it illustrates the challenges students have in navigating the e-learning services and supports that are semi-available to them. E-learning requires IT equipment, but just as important at this juncture, it also requires people who can inform and support students as they enact that learning and discover and build knowledge in new ways. Students need a place to go for this support (physically and virtually via IM or asynchronous means) and people ready to provide guidance. Appointment/drop-in support models or peer-support solutions could be explored.

Recommendations:

- **Survey students during 2008-9 on e-learning demands and desired support in order to establish shape of existing need and features of a centralized, expanded tech training center.**
- **Add a training/information literacy center in 2010 to existing offerings from help.unc.edu and the ITRC (hardware fix-it shop).** This unit could take the form of a staffed (potentially with graduate and undergraduate tech tutors) physical and virtual (IM) help desk for software and hardware use and tools. Someone with a wider view than IT needs to head such an effort. (\$500K)

3) Access to support for any student

The metaphor of “place” became productive in thinking about student needs. We noted and compared places where residential e-learning currently takes place and imagined how students at a distance might interact with the campus services via e-learning supports. In the process, we discovered e-learning spaces that should be imagined and resourced:

On-Campus learning spaces and supports	Possible E-Learning student virtual spaces and supports	Evaluation of Current E-learning Access
Classroom	Exists in smart classrooms and course management system environments. Faculty use and understanding of technology is very limited in some students’ view.	Uneven Hardware/software exists. Huge range of faculty expertise and appropriate use of technology in face-to-face and virtual classrooms
Library	exists via website access and web-based tools	Excellent Both face-to-face and virtual access
Academic support services (writing center, learning center)	Not available to distance students or professional schools, Learning Center online resources not yet developed	Poor Limited access face-to-face, virtual access in the Writing Center only for students in the College

On-Campus learning spaces and supports	Possible E-Learning student virtual spaces and supports	Evaluation of Current E-learning Access
Advising	Website with PDFs, online sign-ups for face-to-face interaction, phone or email support available if you look	Uneven Available support varies by unit. Interactive material is rare online.
Media environments (computers, ipods, video, etc.)	CCI program, limited use of video learning in some DE courses, MRC	Uneven Heavily used by a few faculty and their students
Informal gathering spots (lounges, meeting rooms)	No UNC supported tools. Facebook widely in use, students may use blogs and wikis	Unimagined—90% of UNC students have a Facebook page; however, it's rarely used as a learning forum or connected to courses
Intentional gatherings (group meetings, lectures)	Not available or easily arranged in Blackboard. Sakai has potential here.	Poor Sakai may provide remedy. During interim faculty could use low-cost alternatives if trained
Technology support	Exists online (help.unc.edu). Only hardware support available face-to-face	Uneven Lots available online for the persistent. Fix-it-shop face-to-face for hardware. Little or no problem-focused instructional support available face-to-face
Faculty offices	Some faculty/TAs offer email support or use discussion boards as communication spaces	Uneven Face-to-face meetings infrequent. A growing number use email to communicate with students
Campus events/Event notification	Exists on campus. No UNC supported e-tools to advertise or broadcast these events. Students use Google calendars and YouTube	Uneven Face-to-face students participate in campus life. Students with virtual access do not participate. Students in either mode do not have systems to notify them or coordinate teaching or learning events.
Administrative Offices (registrar, cashiers)	Online course registration, but little else. ERP will create virtual access avenues	Poor but improving Currently poor access for any student. ERP promises to eradicate some of these problems.

As this brief comparison indicates, which student supports exist depend on where you can access service—on campus or online. A continuum of on-campus and virtual services exists

between well-developed and accessible supports available to all student populations (e.g. the libraries) to semi-available well-developed services (e.g. writing center) to limited or non-existent supports (e.g. informal e-gathering spots or calendaring systems.)

Recommendations:

- **Create a committee of students, faculty, existing units in support services, and ITS by fall 2008 who will develop a time-targeted, resourced plan to remedy existing asymmetry in student e-learning support.** (If structure outlined in recommendation #1 exists, this group could do this work.) The implementation of Sakai will address some of these issues (better virtual classroom and communication and community-exchange tools (blogs, wikis) and the ERP will address others (virtual access to registrar, cashiers, etc.) Additionally, the advent of the Center for Faculty Excellence may address students' request to better train faculty in use of existing e-learning tools. A newly formed committee could build on research begun in a sub-committee on student academic needs within the Distance Education Steering Committee in 2005.
- **Expand support for Writing Center and Learning Center services by fall 2008 to include e-learning support for professional and distance students.** This student need has been long-established in the Distance Education Steering Committee and documented by the Writing Center (see addendum.) Existing demand suggests a permanent allocation to support a full-time staff position, additional TAs, and technology development funds (part one-time monies) to design and deliver services (\$250K).

4) Student Support Access and Tools

While another sub-committee provides a comprehensive look at infrastructure needs, we highlight issues of particular interest to students.

Software

- More server based specialized software to allow students to access them in a temporary base and from anywhere
- Scheduling/calendaring tools that allow interactivity between campus events, faculty, and students postings and a feed of calendar /events to students' PDAs.
- Online course evaluation

Hardware

- Greater wireless access—prioritize classrooms, libraries, residence halls, and social spaces
- Greater access to media-making tools and environments and personnel to train students to use this equipment.

Recommendation:

- **Seek broad student input as e-learning infrastructure prioritization and decision-making moves forward.**

Student Services Sub-committee Report Addendum

Writing Center Needs

(Note: this addendum focuses on the Writing Center; however, the Learning Center which now includes support for students with learning disabilities has similar needs taken into account in budget recommendation described above.)

While the Writing Center reports in the College of Arts and Sciences, student demand for academic support from this unit reaches beyond this boundary. Each year, pressure for service increases from undergraduate and graduate students in the professional schools and from programs offering courses at a distance. This increase occurs without promotion of our services to students or units. Demand seems to arise from increased enrollments, program development, diversification of students enrolled, and interest from deans and directors seeking to provide high quality, competitive offerings. This semester students outside of the College comprised about 20% of the total number of student contact hours in the Writing Center.

Prior to this pressure, the Writing Center was already experiencing overwhelming demand for support from students within the College (as documented in annual reports). For over a decade, the Writing Center has served students to the maximum capacity through face-to-face appointments, workshops, and online interactions via our Online Tutor. Contact hours average 4500 per year. Each semester, lack of sufficient staff forces the Writing Center to turn away several hundred students who voluntarily seek support. Funding for this student support has remained virtually unchanged during the past decade.

The Writing Center's original move out of the English department (in 1995) was supported by pan-university funding and was intended to begin to provide campus-wide support for writing. The original budget included a salary for the director, support for 12 Teaching Assistants, and an operating budget to cover office expenses. Several years ago, the Writing Center added two TAs to provide summer school support and an Assistant Director (with enrollment growth funding). Thanks to recent interest in internationalization and QEP resources, an ESL Specialist was located in our office to better serve this cross-campus population in 2006. QEP-supported ESL programming will expand again in the Center in the coming year.

Given this funding landscape, the Writing Center cannot publicly open its doors to additional students from schools or programs beyond the College without additional resources. We regularly have requests from students for individual appointments, from faculty for in-class workshops, and for faculty development from many of the graduate and professional schools. An effort by the Distance Education steering committee two years ago garnered a commitment from eight professional school deans interested in centralized Writing Center support. The Writing Center has attempted several pilot-funding projects with the School of Nursing, the School of Education, and the School of Social Work. The School of Public Health and the Department of Allied Health Sciences have also continued to hope a joint funding resolution will occur that will allow their students and faculty access to Writing Center support. While the School of Law, the Business School, and, more recently, the School of Social Work have instituted forms of writing support for some of their students, the Writing Center serves as the de facto "mothership" for these units and is often called upon to consult on their programs and address complicated individual student concerns.

Possible Remedies:

- Provide a permanent allocation from the Provost’s office to the College of Arts and Sciences for Writing Center support of professional school students and programs.

<i>Pro</i>	<i>Con</i>
<ul style="list-style-type: none"> • Ensures high-quality writing support campus-wide • Ensures access for all students regardless of location or program (especially important for students taking distance courses) • Capitalizes on and distributes professional writing expertise available in the Writing Center • Acknowledges University commitment to writing as an instructional priority 	<ul style="list-style-type: none"> • Slight divergence from existing funding model via deans • Drain on Provost’s Office budget • May compete with funding priorities of the College

- Develop a multi-year service contract in which a group of deans commit to Writing Center support.

<i>Pro</i>	<i>Con</i>
<ul style="list-style-type: none"> • Funding flows from interested deans • Service contract distributes costs across Schools 	<ul style="list-style-type: none"> • Unpredictable for users—students and faculty cannot predict from year to year whether they have paid for access to Writing Center services • Unpredictable resources for the Writing Center—funding variability limits planning or permanent hires • Deans distanced from knowledge of student need • Difficult to negotiate an agreement • No incentive for deans to respond • Funding request hard to understand and distanced from deans immediate, internal needs

Pressure for campus-wide support for writing promises to intensify. As the College institutes its new curriculum writing requirements, more writing will be assigned throughout campus and student competition for the existing limited services will increase. As faculty note and students express in their use of Writing Center services, writing is a valuable skill throughout and beyond the University. **We recommend that the University support wide student access to Writing Center services.**

Quality Assurance Subcommittee

Linda Carl , Louise Spieler, Mary George

Scope

Accountability in higher education has reached a new level of intensity since the publication of the Spellings Report in 2006. Quality assurance and learning outcomes are two major components of accountability. To put our recommendations for quality assurance in context, we will briefly look at some recent initiatives in these areas outside UNC-Chapel Hill. These initiatives have emerged from the government, national educational organizations, commercial vendors, and institutions of higher education. Following a snapshot of external forces, we will look at assessment and quality assurance activities within UNC-Chapel Hill such as those of the Office of Institutional Research and Assessment, the Distance Education Steering Committee, and student government.

Accountability from the U.S. Department of Education: The Spellings Report

“It is time to be frank. Among the vast and varied institutions that make up U.S. higher education we have found much to applaud but much that requires urgent reform. ...There is a shortage of clear, accessible data about higher education and this hinders policy makers and the public from making informed decisions.” Consequently, the Commission made several recommendations including one to “create consumer friendly databases so that prospective students can make informed decisions about institutions.”

<http://www.ed.gov/about/bdscomm/list/hiedfuture/reports/pre-pub-report.pdf>

(September, 2006).

One year later, with a debate raging about the wisdom and practicality of these recommendations, the Department of Education awarded three college associations \$2.4 million to assess existing programs and to develop new tests and tools to measure student outcomes. These associations (the Association of American Colleges and Universities, the American Association of State Colleges and Universities, and the National Association of State Colleges and Land-Grant Universities) are to complete their tasks in 18 months.

<http://www.insidehighered.com/news/2007/09/19/international> (September, 2007).

Accountability for European Institutions: The Organization for European Cooperation

The interest in making institutions of higher education accountable is not only an American phenomenon. The Organization for Economic Cooperation and Development has a group working on creating a common international system to measure the learning outcomes of individual colleges and university systems.

Accountability for Engaged Learning:

For over eight years the National Survey of Engaged Learning has collected data on how students learn and grow. The National Advisory board, after years of remaining neutral on publishing data survey results, is now pushing participants to publish their data. More than 250 institutions have published the results in collaboration with USA today and Indiana Center for Postsecondary Research (<http://chronicle.com/weekly/v54/i11/11a00104.htm> (November, 2007)). The Board is publishing the data in large part in response to external expectations from state and federal government – including the Spellings Commission - and the media.

<http://chronicle.com/weekly/v54/i11/11a03201.htm> (November, 2007).

Accountability for Online Institutions: The Presidents' Forum

The Spellings Commission is looking at the big picture in accountability. Closer to the E-Learning Task force's concerns is the establishment of the President's Forum of major online institutions. The institutions, including Western Governors, Excelsior, and Kaplan, are establishing databases and standards to measure what students are learning and to help them compare academic programs. Starting in 2009, the institutions plan to release what they call "Transparency by Design Reports", which will reveal the results of those measurements so students can see which programs would be most helpful for their chosen careers before they enroll. The Forum's database will facilitate comparisons of their programs.

<http://chronicle.com/daily/2007/10/452n.htm> (October, 2007).

Carol Twigg, in a synopsis "Quality Assurance for Whom? Priorities for Institutions and Consumers in Today's Distributed Learning Environment", (Center for Academic Transformation) of a symposium of e-learning experts, suggested a variety of other tools for comparisons between programs. In addition to accreditation reviews, program indicators that might be made available include programs as well as courses (graduation rate and performance on national exams) -- all data which is generally available now. With more effort, employer surveys, alumni surveys, and employer's data about student success on the job, could be collected and made public. It must be emphasized that the above measures might be indicators of program quality but they are not necessarily measures of learning outcomes. This caveat about measures of program quality especially holds true for other program indicators of performance such as evaluations of the library, bookstore, financial aid, career planning, and tutoring.

While comparisons between programs will be helpful for students searching for certificates and degrees, the need for quality assurance in online courses is perhaps a greater need. Numerous organizations are attending to the need for standards to measure online learning and processes for achieving these standards.

<http://ad.doubleclick.net/jump/infotech.che/;sz=728x90;ptile=2;num=32340?>

Standards for Quality in Online Courses

In "Teaching Courses Online: A Review of the Research" (American Educational Research Association Review of Educational Research, Spring 2006, volume 76, number 1, Marky K. Tallent-Runnets et. al Julie A. Thomas, William Y. Lau, Sandi Cooper, Terence C. Ahern, Shena M. Shaw, Xiaoming Liu---93-135), the authors assert "learning in the online environment is affected by the quality of online instruction. Not surprisingly, students in well designed and well implemented online courses learned significantly more, and more effectively, than those in online courses where teaching and learning were not effectively planned and where delivery and accessibility were impacted by technological problems."

"This finding," the authors claim, "challenges online instructors to design their courses in accordance with sound educational theories. An even bigger challenge to educational researchers is to further investigate the features of online teaching that will most benefit students. Few institutions have written guidelines or policies for online courses."

While few institutions have written policies for online courses, a growing number of institutions and organizations have developed standards for the design and development of these courses. Examples of such standards include those of the Ohio Learning Network and Minnesota Online. Among the most highly regarded are those of the Southern Regional Educational Boards, "Standards for Quality for Online Courses". In fall 2007, the SREB standards were adopted by

the North American Council for Online Education. State consortia have developed such rubrics (e.g. Ohio Learning Network, Minnesota Online) www.nacol.org/nationalstandards/.

The Online Course Evaluation Project (OCEP), a WCET project which is another example of an organization that has set standards based on educational research with a different focus than that of SREB, like SREB, measures online courses against a set of objective evaluation categories. Additionally, OCEP promotes comparisons between courses. OCEP is designed primarily for administrators and faculty who want to use the course developed by another institution.

Processes for achieving quality in online courses

Quality Matters is an inter-institutional peer review program for quality assurance in online learning. A course is judged against 40 standards known to positively impact student learning based on research literature. Unlike OCEP, the emphasis in Quality Matters is on continuous quality improvement. Quality Matters started out as a consortia program of institutions in Maryland. Quality Matters was originally funded by the U.S. government but is now a non-profit organization run by Maryland institutions. Online courses in institutions of higher education across the country have undergone Quality Matters reviews and/or have faculty or staff trained as Quality Matters reviewers. Reviewers include individuals with special knowledge of instructional design, technology, or discipline content. More than 18 institutions of Minnesota Online (www.minnesotaonline.org) use the Quality Matters rubric. Other institutions within Minnesota Online have adapted the rubric and quality assurance process. Minnesota Online is considering making the process mandatory for online courses.

Student Evaluations as an Indicator of Quality

Learning outcomes are the central indicator of quality. Expert opinion is essential for determining learning outcomes. Additionally, there are other useful tools for measuring course quality including success in subsequent courses that depend on the course under study and student ratings. Student ratings are the most commonly used of these tools. There are problems and benefits of commercial and institutional evaluation and rating systems which will be described below.

Commercial Student Evaluations Systems: RateMyProfessors.com as an Indicator of Quality

In October 2007, PC magazine rated RateMyProfessors.com (RMP) the site of the week. By October 31, 2007, RMP -- the most popular of the commercial rating systems - generated ratings of over 6.8 million visitors. As an indication of the growing popularity of the commercial rating sites, RMP has recently purchased and adapted Grade My Professor to My Space. Grade My Professor includes the following six categories: lectures, homework, tests, fairness, grading, and accessibility. In addition to providing feedback from other students on these qualities, Grade My Professor provides a grade history of the professor.

Value of Rate My Professors: Research and Recommendations

Two Appalachian State University professors, Elizabeth Davison and Jamie Price, Department of Sociology and Social Work, wrote, "How Do We Rate? An Evaluation of Online Student Evaluations." (http://www1.appstate.edu/~pricej/TEACHING/methods/RMP_8_06.pdf (August, 2006)) Davison and Price were distressed by what RMP included as well as what it left out. RMP asks students to rate "hotness" even though this rating is not included in a faculty member's overall score. RMP does not have any questions about whether or how much a student learned in a course.

Since Appalachian State University is one of the top 100 schools using RMP, Davison and Price wanted to know more about how students perceived RMP. In further describing their motivation the authors explain that RMP and other student evaluation sites merited further attention because in “nearly all schools in the United States, student perceptions of instructors serve as the main measure of teaching effectiveness.” The authors gave a short questionnaire to a convenient sample of 216 students. They added questions on the instructor’s interest and knowledge, and how much students learned in the class.

In reporting their results they noted how seriously students take the RMP Web site: “Our study shows most students are aware of the RMP website, most visit it, most think of it as credible, and, alarmingly, most students use it to choose instructors.” The authors warn that “in a consumerist’s environment ... student evaluations are not ‘good’ data....this data should not be used by students or organizations to evaluate an instructor’s ability to teach.” Nonetheless, they conclude, “We urge colleges and universities to develop their own RMP Web sites. Well designed student evaluations of teaching can be informative and motivate pedagogical change. (Gallagher, 2000) Questions should focus on learning (Delucchi, 2000; Fries and McNinch, 2003), reinforce the purpose and value of the educational organization, and be relevant to the discipline. In our student survey, students rank the more serious academic factors (such as how much they learn and instructor expertise) as the most important information. This leads us to believe if principal measures of teaching effectiveness are provided, students will utilize and benefit from these measures. We recommend using Koeber's (2005 model) online, to collect data, quickly, efficiently, and with data summaries available to students. Such a strategy would likely displace Web sites like Rate my Professors.”

Two University of Maine professors, Ted Coladarci and Irv Kornfiel, compared 426 Rate My Professors ratings with formal evaluations used by the university. They found no significant correlation between “hotness” scores and traditional student evaluations. However, they report a significant correlation with the formal student evaluations about the overall quality of the course and the difficulty or ease of the course. Correlation was highest for those professors popular on RMP. The University of Maine researchers, like the Appalachian State University researchers, recommend putting their official student evaluations online. <http://pareonline.net/pdf/v12n6.pdf> (May, 2007).

University Online Evaluations: Impact on Use of Rate My Professors

In 2002, Yale University began an online evaluation with six questions – four of which are text. When the faculty adopted the online resolution with results being reported to the students they also adopted a resolution that the system be evaluated in two years. The authors of the two-year follow-up note: “Students report that the responses are generally serious and constructive and that exceptions to this are rare.” Moreover, “the importance of the OCE (online course evaluation) to students can be seen in the relative lack of interest in using unverified teacher “evaluation” sites like ratemyprofessors.com.” http://www.yale.edu/yalecollege/faculty/administration/reports/teaching/01_07.html (January, 2007).

University Online Evaluations: Types and Range

Brigham Young University has a Web site of institutions with online evaluations (<http://onset.byu.edu>). This Web site lists five levels of these evaluations. The highest level entails evaluating all courses and reporting the results online. Carnegie Mellon, MIT, the University of Virginia and Yale are among the institutions that report their data online. While registered students in all the level-five institutions have access to evaluation data, access for the prospective students or the general public is usually not possible. The University of Colorado is

an example of an institution that provides such access to the general public along with the professor's grading history for the past five years. At the Johns Hopkins University, the Bloomberg School of Public Health provides the general public information from student evaluations.

While the collection of data from students reported in the BYU Web site is done at the end of the semester, Princeton students have recently instituted online mid-semester evaluations with the idea of helping the professor improve the course as it is being taught. Students have also taken the initiative at BYU in establishing Students' Consulting on Teaching. This student-run service hires 25 students to observe professors' classrooms and report back to them the view from the students in the seats. Student observations are done only at the request of the faculty. <http://chronicle.com/daily/2007/10/452n.htm> (October, 2007).

Assumptions

The recommendations on quality assurance at UNC-Chapel Hill respond to the need expressed in the task force reports of the Strategic Planning Committee for Information Technology, the report of the Distance Education Task force and the task force report of the Assessment Policy Advisory Committee. These recommendations also complement the activities and suggestions of the Distance Education Steering Committee (DESC); the experience with Quality Matters reviews of eight courses at UNC-Chapel Hill; the online evaluation initiatives at UNC-Chapel Hill and in area institutions; and, General Administration's efforts to assure quality for The University of North Carolina Online.

Strategic Planning Committee for Information Technology and Report of the Distance Education Task force

Recent reports from both the Strategic Planning Committee for Information Technology (May 2007) and the Distance Education Task force (February 2007) emphasize the need for quality in e-learning. In particular, the Distance Education Task force stressed the need for "standards for evaluation and maintaining academic quality" and called for "rigorous evaluation programs to assess quality of all curricula". The task forces also noted that investing in core resources and optimizing instructional technology can enhance educational quality.

Assessment Policy Advisory Committee

In June, 2006, the Assessment Policy Advisory Committee (APAC) submitted a report called "Recommendations to the Executive Vice Chancellor and Provost Concerning Resources for Assessment". The report urged "the necessity of adequate resources to enable academic units to meet the University's expectations for assessing student learning outcomes on an ongoing basis". Nowhere in this report is there a distinction between distance, e-learning and face-to-face classes. The recommendations included:

- Academic units should be made aware of existing resources for assessment support.
- Centralized support services should be provided to help academic units conduct assessment activities as needed.
- It will be more cost effective to invest additional resources in expanding centralized professional services such as those that currently exist in IRA and CLT than to attempt to provide funding for each unit to create its own in-house assessment support services.
- All schools and the College of Arts and Sciences should be encouraged to create (where necessary), implement, and report on their internal systems for managing and facilitating assessment, and provided with sufficient resources for that purpose.

- Resources comparable to those provided for course development should be made available to units in the College and other schools that undertake comprehensive assessment plans.
- The Provost's office should promote cross-fertilization of best practices and expertise in assessment across academic units.
- Where possible, student learning outcomes assessment should be integrated into other evaluation and approval processes currently operating within the University.
- Resources should be provided to support programs in using the results of assessment for making improvements in student learning.

As units transmit results of assessment into plans to address identified needs for improvement, resources should be available to enable the units to affect their plans.

The Assistant Provost and Director of the Office of Institutional Research is in the process of reactivating this committee. In sum, the Office of Institutional Research is poised to focus attention on learning outcomes.

Findings

No Significant Difference in Quality Assurance: The Distance Education Steering Committee (DESC)

The Distance Education Steering Committee and the Distance Education Program Directors, in numerous meetings and retreats, have argued that learning outcomes should be the same for distance and face-to-face courses.

Quality Matters: Review of Eight Courses at UNC-Chapel Hill

In 2006-2007, the Office of Distance Education and E-Learning Policy contracted with Quality Matters for a review of seven courses in different departments and schools. One review is ongoing. Faculty in six courses found these reviews useful and changed at least part of their course design. A common comment was that Quality Matters affirmed what they were doing or picked up problems that the faculty member would never have thought about. When Quality Matters identified the issue, the faculty member saw the need for and made the change. (Personal communication from interview notes of each faculty by Linda Carl, July 31, 2007-November 14, 2007). Comments from two faculty members elaborate upon this phenomenon: "There are things I would have missed for 20 years without the review. They looked at the big picture and the big needs." And, from a second faculty member, "I made a ton of changes... The changes I made were major... It took a good 30 hours to make changes." When asked if they thought the Quality Matters Review process would work for UNC-Chapel Hill, all but one of the faculty members agreed that a voluntary process would be beneficial.

Online Evaluation at UNC-Chapel Hill and Area Schools

Online evaluations within the UNC system and neighboring schools, in which the reports are generated online, are growing steadily. Appalachian State University and Western Carolina University have implemented such systems. Two neighboring institutions – Duke University and North Carolina Central University (NCCU) – are in the process of implementing an online evaluation system. NCCU calls its program the Eagle Accountability Database.

North Carolina Central University's responses are all multiple choice. The database will only be available to the college community. According to the News and Observer, May 14, 2007, in a meeting of the Faculty Senate "professors didn't appear bothered by the project. Some even expressed their approval, saying it was healthy to critique professors." The multiple choice

component of the Eagle Accountability Database was important to faculty acceptance. Additionally, NCCU uses another student survey system called the Student Survey of Instruction. Only the results of this system become a part of the faculty member's evaluation. Like NCCU, the Duke program is run by students. Faculty members must agree to be evaluated which partly explains why the participation rate is only 17.1%.

UNC-Chapel Hill's database is still a work in progress. In 2002, the Provost asked CTL and CIT to work together on an online evaluation for all courses at UNC-Chapel Hill. This project was subsequently transferred to the Office of Institutional Research and Assessment (IR). The evaluation has been piloted in the last year and pilots are ongoing. Pilots have indicated that the current evaluation form needs to include some revisions. IR does not have the staff to make the changes requested by faculty in the pilots. Currently, 200 courses are being evaluated and faculty interested in volunteering their courses for the online evaluation can probably also be accommodated. However, due to the implementation of the ERP, it is unclear when the online evaluation will be able to be extended to the whole campus as planned. The Office of Institutional Research is preparing a report to the provost that will be delivered in the next few weeks. Recommendations from the pilot will be considered when making the subcommittee's final report.

The online evaluation, as planned, is to include four to five questions to be selected by and reported to students. A recent Daily Tar Heel, 9/10/07, article headlined that Eve Carson, Student Body President, was eager to initiate a commercial student-rating system. Carson and the co-chair of the Academic Affairs Committee, however, denied this goal. Instead they emphasized their desire to work with the Office of Institutional Research. They appear to be very responsible and serious about data collection and reporting. They are eager to have an evaluation system implemented. (Personal communication Linda Carl, October 27, 2007)

Assessments in Professional Schools

Accreditation agencies for the professional schools in Health Affairs generally require learning objectives to be matched with learning outcomes. The School of Pharmacy (SOP) is deeply engaged in this activity and mapping their curriculum. The SOP teaches students at a distance at Elizabeth City State University and is innovatively using technology to match learning objectives and assessment. Several of the professional schools in Health Affairs are also invested in learning outcomes as measured by performance on national exams. Information from these exams is not currently available to prospective students or the general public. For some professional schools, making information available may require the cooperation of the accrediting organizations.

General Administration: Online North Carolina and Quality Assurance

In conjunction with the University of North Carolina Online, General Administration's clearinghouse for online courses and programs system-wide, GA has established an Online Quality Council that includes representation from each system school. Associate Provost Carol Tresolini has been identified as UNC-CH's representative on the Council, which will convene regularly to address issues of quality. Although its first meeting in December 2007 focused on general information about the University of North Carolina Online system and efforts to date to address issues of program quality, the use of we expect that it will focus on further exploration of ways in which the campuses approach quality assurance.

Cost Effectiveness

The subcommittee was asked to consider cost effectiveness along with quality assurance. Comparing the cost effectiveness of online versus residential courses is becoming more

problematic as more courses become hybrid. Gathering accurate information beyond what is generally available for even those classes that are either totally traditional or online is also very difficult when building costs and services such as electricity must be accounted for.

Recommendations for a System to Measure Quality and Cost Effectiveness: What information and measures are most appropriate for evaluation of instruction? Should standards or measures be different for on-campus (face-to-face) versus off-campus (distance)?

- 1. Policy Expansion and Implementation:** Learning outcomes are the central indicator of quality. The Office of Institutional Research and Assessment (OIRA) is charged with coordinating assessment activities including working with campus units to develop and measure learning outcomes. In carrying out this function, the OIRA works closely with the Assessment Policy Advisory Committee (APAC), which has representation from all of the colleges and schools. In 2006, the APAC made formal recommendations to the Executive Vice Chancellor and Provost concerning policies that should guide assessment of student learning outcomes and emphasizing the need for adequate resources to support the assessment process campus-wide. While these recommendations were intended to cover assessment of learning outcomes in all academic units on campus, we suggest that OIRA and APAC develop additional recommendations that more specifically address the need to assess learning outcomes across all types of instructional delivery. In addition to the web-based materials and consulting resources that OIRA and APAC are currently developing to assist academic program faculty in identifying effective methods of assessing outcomes, we suggest that they include information on innovative methods of measuring learning outcomes for e-learning and distance education. UNC-Chapel Hill faculty with expertise in developing e-learning and distance education programs could serve a vital role in helping to support good assessment practices across campus by volunteering to work with OIRA and APAC in developing these resource materials and serving as consultants to faculty in other units attempting to create or refine their assessment practices. *High priority, FY 09, funding amount as determined by OIRA.*
- 2. Professional Development for Assessment and Learning Outcomes:** As part of the effort to make faculty for all courses better informed on techniques for assessment of learning, alternative methods of measuring learning outcomes should be promoted. Learning outcomes should not be different but assessment at a distance may require innovative methods that faculty teaching face-to-face classes may not have considered. This professional development can be spearheaded by the Center for Faculty Excellence. *High priority, FY 09, funding as part of ongoing work of Center.*
- 3. Professional Development: Voluntary Peer Review:** Course design is a major factor in learning outcomes. The Center for Faculty Excellence should develop a voluntary internal peer review process especially appropriate for the design of online courses. This model might be adapted from Quality Matters. Another adaptation could also be used by on-campus programs. The Center for Faculty Excellence might institute a train-the-trainer program so faculty and staff could share the process with colleagues in their schools. *Medium Priority, FY 09, funding may be needed to pay peer reviewers.*
- 4. Online Evaluation:** The current online evaluation system functions but cannot be customized to adapt to many of the methods used for instruction on this campus. The system is also not adaptable to courses that vary from the standard schedule for lecture

courses, which is sometimes the case with distance and e-learning courses. Additionally, the pilot study results have revealed that the core questions on the evaluation questionnaire are not well-suited to the instructional experiences of distance education students. OIRA is compiling a report on the results of their evaluation of the pilot effort. It is consulting with ITS on options for enhancing or replacing this system to increase current the functionality as well as to ensure continuous course evaluation services to the campus during and after the transition to the ERP. Final recommendations from the Task force should consider the findings of this report, which will be presented to the Provost in a few weeks. *High Priority, FY 08-09, funding as determined by IR.*

- 5. Student Access to Evaluation Information:** In making their course selections, students should be able to refer to results of evaluations conducted by this campus rather than relying on commercial services such as Pick-a-Prof. The extent to which results of the online evaluation will be available are still uncertain. At the very least, plans include making available to students a summary of the responses to the five questions designed by Student Government in cooperation with the Academy of Distinguished Teaching Scholars. Several of these questions apply only to the classroom. At the very least these questions need to be rephrased so that they apply to distance education students. Distance education faculty and students should also have input into their formulations. Sufficient information should be available on such questions as how much they learned and instructor expertise.

Professional schools which are using other online evaluations should be encouraged to make some or all of their evaluation data available to students. Professional schools should also consider making data available to students on performance on national exams and any other data they have on learning outcomes. This information is especially important to off-campus students who do not have the resources (peers and faculty) that students on campus do to help them choose classes. Students on campus often ask their friends and instructors for advice on what courses and/or instructors they should consider. *High Priority, FY 08-09, funding as determined by OIRA.*

- 6. Prospective Student and Public Access to Evaluation Data:** Off-campus students who are considering an e-learning class should have access to the same data available to UNC students. *Medium priority, FY 10, no funding.*
- 7. Advocacy to General Administration:** The University should advocate for the use of the same standards for online programs as are used for traditional programs and for an emphasis on learning outcomes. *Low priority, FY 08, no funding, ongoing.*
- 8. Cost Effectiveness:** The subcommittee was asked to consider cost effectiveness along with quality assurance. Considering the continuum of courses using technology and the change in technology use from year to year, the cost effectiveness of online courses should be worked out on a case-by-case basis within each academic unit.

Administrative Systems Subcommittee

Bob Blouin, Jill Fitzgerald, Lee McLean

Scope

The Administrative Systems Subcommittee was charged with considering e-learning policies, procedures, personnel, and funding models. As was the case with the other subcommittees, we focused broadly upon administrative systems for e-learning for on-campus and off-campus learning. In thinking about the administrative systems needed to support e-learning technology on this campus, we heeded the observation of the campus' Distance Education Steering Committee, which has noted that notes that "[Distance Education] occupies one end of a continuum of instructional approaches characterized by strong reliance on information systems and communications technologies to support faculty-student interactions. Now and in the future, there will be many possible learning modalities that could be enhanced by technology and offer a rich set of hybrid approaches (Final Report, February 16, 2007, p. 4)." It is clear that e-learning will play a significant (and probably increasing) role in all of our teaching and learning activities. Our subcommittee sought to address the implications of this reality for the administrative systems both on the Chapel Hill campus, and within the UNC system as a whole.

Assumptions and Guiding Principles

A set of assumptions and guiding principles guided the subcommittee work:

- Policies and systems for e-learning must support the mission of the university and, more specifically, the priorities identified in our **2003 Academic Plan** : "Continuing to make available appropriately supported and high-quality technological resources is an important component of Carolina's ability to offer an excellent academic setting . . ." (p.12). Our Academic Plan further notes that infrastructure is needed to assure adequate staff support for faculty development and support of e-learning technology, and also notes that "classrooms must be continually improved and adapted to changing instructional techniques" (p. 24).
- Technology applications and opportunities are expanding at logarithmic rates, and will continue to do so. Therefore, Administrative Systems must be designed to allow continuous monitoring and appropriate responses to new technologies as these become available. In short, we need a system that supports coordinated and systematic **change management**.
- Resources to support instructional technology systems are finite and must be administered in the most cost effective way to maximize the educational benefit from the university's investments of personnel and financial resources.
- Administrative systems associated with e-learning across this campus should be characterized by transparency. All constituents (teachers, learners, and administrators) should have a clear understanding of the function, responsibilities, accountabilities, and coordination associated with the creation, maintenance, and assessment of e-learning support systems. There should be a common knowledge of: a) Who does what? b) What is/are the source(s) of funding for each e-learning activity/service/purchase? c) What are the responsibilities that reside in ITS, the Provost's Office, and the Schools/Centers? and d) Who coordinates all of the administrative systems?

- All teaching and learning today, regardless of physical location, is supported, to varying degrees, by technology to achieve specific pedagogical goals. Effective use of instructional technology requires that we begin by focusing on the student and asking how we can best support the student's learning of this subject area, regardless of where the student is located.
- Pedagogy should drive technology, not the reverse. Faculty should be able to design an optimal pedagogical approach to achieve student learning goals and then access the appropriate technology to implement this approach.
- The academic funding model employed to allocate resources across a university community should reflect the mission and academic priorities of that community.

Conclusions/Observations

The following statements summarize observations and conclusions drawn by this subcommittee based upon our reading of previous committee reports, discussions in subcommittee and task force meetings, and informal communication with colleagues around campus. Our recommendations include the need for more formal and comprehensive analysis of several aspects of the current systems.

- There is inconsistent knowledge about and access to ITS Teaching and Learning Division services by faculty and administrators at UNC.
- Services provided by the Teaching & Learning Division of ITS are perceived very favorably by faculty and administrators who know about and make use of the services.
- There is a very real danger that instructional technology is relegated to back-seat status in the context of other daily demands on ITS resources related to campus security and business systems and the need to continually be advancing the national competitiveness of UNC information technology and computer science systems.
- There is a lack of common knowledge about what is available, where, and for whom regarding instructional technology support (interface of pedagogy and hardware/software).
- There is lack of common understanding or definitions of key aspects of e-learning (e.g., distance education vs. learning at a distance; e-learning vs. asynchronous learning; linear delivery vs. blended delivery).
- Many unit administrators (Deans/Chairs/Directors) are uncertain about what supports and services should be funded at the unit level. There is a need for transparency and predictability in how technology support funds (including student 'education and technology' fees) are allocated to support needs of all campus units. There is currently a general perception of inequitable distribution of these resources.
- The UNC System currently operates under a complex, difficult-to-understand funding model, which often complicates program development and could influence adversely pedagogical decisions.
- We may not have clear and equitable campus-level policies regarding access to needed supports for instruction

- There is a lack of understanding of the relationship between the academic units and central ITS (including T&L Unit), among both faculty and School/Center administrators.

Specific Recommendations

We first suggest an overarching recommendation. The recommendations which follow it are all closely lined to it.

Recommendation # 1: Conduct a comprehensive and systematic review of current and potential alternative administrative structures for both centralized and decentralized e-learning support systems and their interrelationships. Goals for the review should include producing recommendations regarding reporting lines, budget sources and authority, clarity in unit relationship to central IT functions, and the role and composition for a standing campus committee to assure effective communication and coordination of services. We also recommend analysis of the functions and administrative structures of, and interconnections among, the Center for Teaching and Learning, the Division of Teaching and Learning, the new Center for Faculty Excellence, central IT, and related support units in individual schools and centers.

Timeframe/Priority: Highest Priority/ Complete by end of 2008.

Stakeholders & Responsible Office: Current E-Learning Task force; external consultant with expertise in organizational analysis; Provost/Assoc Provost for Academic Initiatives; other key stakeholders as identified for specific components of analysis

Estimated Cost: \$300,000

Recommendation # 2: Interview top administrative representatives (Directors, Deans and, as appropriate, Associate Deans or Chairs) for each School, Department, and Center to determine their priorities, concerns, and perspectives on e-learning supports in their school/unit

Timeframe/Priority: Spring, 2008; Complete in conjunction with recommendation #1, above

Stakeholders & Responsible Office: Directors, Deans, Chairs; Provost/Associate Provost for Academic Affairs

Estimated Cost: Can be completed through allocation of existing staff resources

Recommendation # 3: Evaluate and, as appropriate, realign reporting lines and budget allocation for the current ITS Division for Teaching and Learning. The goal of such a realignment should be to assure that this unit is identified as a critical component of all future planning and ongoing operations related to the university's vast teaching responsibilities, which fall under the Provost's Office. Such a repositioning recognizes the primary relationship of instructional technology as a support to pedagogy, rather than an end unto itself. The specific structure of the Teaching & Learning Division, and its relationship to ITS, the current Center for Teaching and Learning and the proposed

Center for Faculty Excellence, should be determined as part of a larger, systematic analysis of current administrative structures for e-learning on the campus (see recommendation #1).

Timeframe/Priority: Highest Priority; Begin dialog with new CIO immediately about this realignment; Complete by August 2008

Stakeholders & Responsible Office: CIO (Conrad); Director of Teaching and Learning Division (C. Green); Provost/Assoc Provost for Academic Initiatives (B. Gray-Little and C. Tresolini)

Estimated Cost: To be determined through study recommended below.

Recommendation # 4: Identify and analyze current funding sources at central and local unit levels; total level of funding currently committed to e-learning on the campus. The results of the analysis should be available to external consultant and key stakeholders charged with conducting organizational system review (see recommendation # 2). The results should be reflected in resulting recommendations for more cost-effective use of resources to support and coordinate services at both central and local level

Timeframe/Priority: High priority; complete by August 2008

Stakeholders & Responsible Office: Provost; CIO; Deans; and Center Directors

Estimated Cost: Unknown; Costs involved will be staff time at both local unit and central office levels

Recommendation # 5: Conduct a systematic review and analysis of current UNC system and UNC Chapel Hill campus funding models to identify and enact policy changes needed to realign our academic priorities with the allocation of system and campus resources

Timeframe/Priority: Initiate discussion with General Administration by December 2008.

Stakeholders & Responsible Office: Provost's office; Primary cost would be time to gather and report information by academic and budget planning personnel in all campus departments, schools and centers

Estimated Cost: Unknown

APPENDICES

APPENDIX A - E-Learning Task Force Roster

The 20 initial task force members were:

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Erin Branch, Graduate Student in
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Amos Espelade, Undergraduate Student
in Philosophy



APPENDIX B – Memo to John Oberlin

M E M O R A N D U M

TO: John Oberlin, Associate Vice Chancellor and Interim CIO

CC: Bernadette Gray-Little, Executive Vice Chancellor and Provost

FROM: Lee K. McLean, Chair, Provost's Task Force on Campus Supports for Technology-Assisted Teaching and Learning

DATE: October 12, 2007

RE: Task Force feedback on proposal to adopt Sakai for campus LMS

The Task Force has considered carefully the proposal to move from Blackboard to Sakai for instructional support. We recognize that the issue is a complex one, involving faculty retraining, perhaps hidden costs in open source code support, and unanswered questions concerning the new system's potential academic benefits. On the other hand, we are impressed with the due diligence shown by our ITS group in assessing the benefits of Sakai. We see no reason why the University should not proceed with preliminary planning for an ultimate migration to Sakai.

At the same time, we feel strongly that this planning, and the actual migration process, must be informed by the specific experiences and feedback from pilot applications scheduled to be conducted by the "Sakai Action Group" over the coming year. As our task force works on developing recommendations for comprehensive e-learning support systems for UNC at Chapel Hill, we will most certainly use the Sakai planning process as a test case scenario of our ultimate challenge: How and with what input should this campus anticipate and implement appropriate changes in our instructional technology systems?

Thank you for giving us this opportunity to review your proposal and to provide input. We look forward to hearing progress reports from Charlie as you move forward with your planning.

APPENDIX C – ITS Strategic Plan: Teaching and Learning Section

Strategic Planning Committee for Information Technology

Final Report : May 2007

Excerpts

Goals and Proposed Actions Summary

Goal One: Education and Learning

Use IT to support and enhance educational programs and curricula to prepare our students to function productively in a global society throughout their lifetimes.

IT-accessible learning environments that meet teachers' and learners' needs:

- Evaluate the CCI and recommend how well it meets institutional priorities for teaching and learning. A special committee should submit its report by January 2007.
- Ensure that all classrooms are equipped to support common pedagogical approaches and have the capacity to accommodate temporary or mobile installations. ITS will produce a three-year plan and cost estimate to bring all classrooms up to a base level of support by September 2007.

Integration of teaching, research and public engagement

- Teams of key stakeholders should be convened to identify opportunities to integrate research, teaching and public engagement and recommend ways to use IT to support it by January 2008.

Improved support for effective teaching and learning methods:

- The university should invest in new designs for learning spaces that support collaboration and active learning. ITS working with others should propose how to pilot new learning space designs during 2007-2008.
- ITS working with others should establish testbeds to pilot the use of emerging instructional technologies and evaluate their effectiveness.
- Guidelines for assessing learning outcomes should be created by January 2008 and implemented for all IT-enabled instructional projects.
- The Provost's Office should develop an incentives program that supports faculty participation in strategic technology pilots; to be reviewed by faculty and ready to implement by January 2008.

Prioritization and optimization of instructional technology resources on campus:

- ITS, with broad consultation, should develop central instructional support priorities by June 2007.
- The CIO should communicate the importance of including IT expertise in key instructional improvement initiatives before summer 2007

- A team from ITS, CAS, and CTL should plan how to use IT effectively to improve gateway courses by August 2007.
- A university-wide committee should be charged to assess needs and uses for distributed learning systems, keeping in mind the capabilities of learners both on and off campus. This committee should have input into the UNC Online portal development from General Administration. A protocol should be developed before the end of 2007.
- ITS, with broad consultation, should explore the use of learning management systems that enable innovative pedagogy. Pilot an open source LMS during 2007-08.
- The Provost's Office, with broad consultation, should present a plan to improve instructional support by better integrating pedagogical and technical support organizations on campus, by September 2007.

Subcommittee Plans

Education and Learning

Teaching and learning are activities central to the University's mission, and our use of information technology should support and enhance our ability to provide high-quality education for all of the populations we serve. The modes of teaching and learning in higher education will continue to evolve, and appropriate information technologies and services should be available to support this evolution. Although the needs of and approaches to undergraduate, graduate, professional and continuing education may differ, all must be appropriately supported by the resources that the University devotes to information technology. Further, these resources should be deployed in ways that not only maintain and expand the capacity for use of the technology in ways that are already well known, but also support efforts by members of the University community to engage in innovation that enhances the educational experience and makes it available to new populations.

While this document will serve as a useful guide for IT expenditures at the University, those decisions must also be considered in the context of other strategic visions on campus, within the UNC System and at the national level.

Updating IT-Accessible Learning Environments

Access to widely-distributed and functional information technologies is a prerequisite for realizing the educational potential of IT. Properly equipping and maintaining the broad array of environments necessary to connect teachers, learners, scholars and community members will enable the institution to meet its instructional and community-based goals. This point was reinforced by the *Report of the E-Learning Task Force*, which emphasized the importance of investment in core resources to support e-learning.

To date, the major vehicle for providing universal access to IT resources for faculty and students has been the Carolina Computing Initiative (CCI). Established in 2000, the CCI was designed "to ensure that Carolina students, faculty, and staff have easy access to high-quality and affordable technology and can use it effectively". Evaluation data gathered in 2002-2003 on the CCI suggested mixed results. Laptops have proven to be very important to the academic careers of most students, even if their integration with course-related activities has been uneven. It is time to review the initiative to determine if students and faculty would be better served by an alternative approach to technology provision. Since the CCI did not have any specific goals related to pedagogy, the first step in the evaluation must be to develop such goals (particularly in reference to supporting diverse instructional approaches and learning activities). The future of the program should then be assessed, using institution-level instructional goals as a guide.

The growth of inter- and multi-disciplinary programs and approaches has blurred traditional disciplinary lines, bringing together faculty members from the College of Arts and Sciences with faculty from the professional schools in Academic and Health Affairs to create new areas of study that stimulate teachers and learners. At the same time, these new fields present complex challenges to traditional funding models and call for rethinking the arrangement of central vs. discipline-based support to meet teachers' expectations for greater consistency across teaching facilities.

To keep pace with these changes in the academy, we need to adopt a campus-wide approach to classroom design and support, insuring that each facility be equipped with IT hardware and software that supports the most common pedagogical approaches. For example, every potential teaching space should have the capacity to accommodate the use of temporary or mobile hardware and software solutions. The ITS Teaching and Learning Division should have overall responsibility for making these tools available and assisting interested faculty in making use of them in their teaching, particularly those tools that are sufficiently generic as to be useful in a variety of disciplines and pedagogical styles.

Individual schools and disciplines will have special needs not shared by the rest of the University. For example, professional schools engaged in continuing education of in-service practitioners remote from Chapel Hill have need for robust two-way audio, video, and data communication with remote sites, whether via fixed installations or mobile technologies. To the extent that such specialized needs are genuinely unique, the school or department involved should support them

Recommendations

- A team comprised of the ITS-Advisory Committee of the Teaching and Learning and Academic Computing divisions of ITS, Student Government, and the Graduate and Professional Student Federation should undertake an evaluation of the CCI, with guidance from CTL and the Office of Institutional Research and Assessment. The evaluation should be based in part on goals for supporting diverse instructional approaches and learning activities that should be developed by CTL in collaboration with faculty members and student representatives, especially those who have made effective use of laptops and other mobile and fixed IT components.

Implementation: The CIO and the Provost will charge CTL with leading the development of institutional priorities for supporting diverse teaching and learning activities. Those recommendations will be submitted to the Provost and CIO by July 1, 2007. The CIO will then convene a committee to assess and make recommendations on the CCI. That report will be submitted to the CIO by January 1, 2008 for further consideration.

- The ITS Teaching and Learning Division should work with units throughout the University to identify common needs and ensure that all classroom facilities are equipped to support common pedagogical approaches and have the capacity to accommodate temporary or mobile installations

Implementation: ITS-TL will produce a three-year plan and cost estimate for bringing all campus classrooms up to a baseline level of IT support. The report will be completed by September 1, 2007 and presented to the Provost and the CIO for further action.

Integration of teaching, research and public engagement

One of the great strengths of research universities is their capability to integrate their various missions so that research and scholarly work is brought to bear on education and on engagement with the public that the institution serves. Integrating advanced research

findings and methods into education requires sophisticated IT resources, many of which originated in discipline-specific context but may have wider utility as inter- or multi-disciplinary alignments expand.

Information technology should make it possible for faculty and students to easily access scientific databases, large-scale simulations, museum collections, manuscripts, images, library resources, clinical records, and other types of information for use in the classroom and in academic activities outside the classroom. The IT resources needed for integrating research into teaching are less likely to be available to students and teachers working in non-classroom settings, the community or the field. To accomplish our goals, we must broaden the availability of research and communication tools to make access between the campus and the community more transparent.

Similarly, public engagement integrated with education frequently depends upon field-based research and communication with colleagues, students and community members at remote sites. This may involve the installation of dedicated communication equipment, the use of mobile technologies such as cell phones and portable media players, or a mixture of fixed and mobile technologies.

Recommendations

- An evaluation of the opportunities to integrate research, teaching and public engagement in University programs should be undertaken by collaborative teams composed of the Deans of Undergraduate and Graduate Studies in the various schools of the University, the Office of Undergraduate Research, the APPLES Program (especially its Community-based Research Initiative), the Carolina Environmental Program, and the Vice Chancellor for Engagement, advised as necessary by the appropriate Institutional Research Board and the Vice Chancellor for Research and Economic Development.

Implementation: A series of meetings will be convened by Provost's Office during 2007 to discuss integration opportunities. A report on recommendations generated via these meetings will be submitted to the Chancellor and Provost by January 1, 2008.

Support for effective teaching and learning methods

Information technology should support institutional initiatives to explore and adopt pedagogies that have emerged through the scholarship of teaching and learning. Faculty should be provided with guidance and support in incorporating strategies that emphasize inquiry, discovery, creativity and problem-based learning; that support higher-order thinking and active learning methods (which may include simulations, case studies, games, etc.); that leverage advances in research and involve critical judgment rather than simple acquisition and application of facts; and that promote collaborative learning and teaching.

One of the clear benefits of information technology lies in the way in which it can erase temporal and physical boundaries, and thereby facilitate communication and engagement among individuals and groups. On our own campus, technology is used daily to promote greater access to instructional materials through such resources as course management systems and the library's E-Reserves. Similarly, instructors use listservs, blogs, wikis, electronic bulletin boards and online chats to promote dialogue and knowledge creation among a variety of students, scholars, and interest groups. A number of courses use

videoconferencing technology to connect and communicate with distant peers and colleagues. These examples demonstrate how investments in information technology can expand and extend the educational experience of our students, offering them access to resources around the globe. The *Report of the E-Learning Task Force* suggested that “hybrid courses in seamless classrooms” are likely to be the most effective models of e-learning in the future.

The University should build on these examples on a number of levels. All learning spaces, be they classrooms, informal collaborative spaces, labs, auditoria, or virtual learning spaces, need to be designed so that they promote collaboration and active learning. Currently, the University spends approximately \$2 million dollars a year on classrooms that are configured to reinforce one-to-many teaching models and do little to promote collaboration. ITS, Facilities Planning and the Registrar should begin working with faculty and students to design and develop instructional spaces that are thoughtfully configured to promote the highest possible levels of collaboration and engagement. These spaces should incorporate technologies proven to promote and encourage active learning, such as innovative capture and projection technologies that facilitate access and participation to anyone involved in the discussion or exercise, regardless of location.

The technologies most useful for instructional use vary among disciplines, faculty members, students, and educational settings. In some disciplines the capacity for a large group of students to engage simultaneously in the solving of individual quantitative problems with instructor oversight may enhance the learning process, whereas in other disciplines the ability of a student to find a series of visual images to document the progression of events or conditions may be more valuable. Learning environments should be sufficiently flexible to accommodate multiple learning and teaching styles.

In order to further advance diversity in this area, the University must strike the proper balance between supporting popular, mature instructional technologies and those emerging technologies that might be used more widely at a later date. We must continue to pilot the use of new learning technologies, both inside and outside the classroom. We must also cultivate an improved awareness and understanding of technology services and trends that transcend higher education. Given the growing commoditization of digital devices and applications, campus-supported technologies may be less important to future educators and students.

Without a robust method for evaluating the effectiveness of various technology-enabled strategies and pedagogies, institutional investments in instructional technology are likely to under-perform. Good evaluation data must be available to inform decisions about the viability of the technology being considered and its implementation. Building on current campus efforts to assess learning outcomes, all instructional initiatives with significant IT components should adhere to a baseline assessment protocol. To this end, all new teaching and learning initiatives should include an assessment plan that would allow for an evaluation of the efficacy of the new technology after a reasonable period of time (e.g., six months) following implementation. We recommend the following general principles. First, needs assessments with identified relevant audiences should be conducted before any new services or technologies are implemented. Based on that information, ITS should develop measurable goals for the adoption of the new service or technology prior to implementation. To assure uniformity in the conduct of the evaluations, a standard evaluation form or protocol (e.g.,

web-based form, focus groups), should be generated and modified when needed based on the knowledge and skills students must acquire to use the services in instructional settings. To assure that appropriate cost/benefit evaluations can be made, assessments of numbers of individuals served and the types of technology issues addressed by the use of new services or technologies should be regularly provided. And, finally, to assure that all resources provided are fully utilized, assessments of knowledge of the new technology should be conducted to ensure that all university constituencies (e.g., faculty, staff, graduate students, undergraduates) are aware of where to go to obtain help with technological issues.

Each evaluation should include a judgment about the adequacy of the new service or technology for its primary purpose, areas for potential change and improvement in implementation, costs incurred, and a recommendation about the continued use of the new technology.

None of these endeavors will have a significant impact on overall student learning without the participation of our faculty. The shortage of real faculty incentives for adopting effective teaching methods has been documented in a number of campus publications over the past decade. Realizing the potential of technology-enhanced pedagogies is closely tied to the University's willingness to invest in the enhancement of instructional quality.

Recommendations

- The University should invest in new designs for learning spaces that facilitate collaboration and active learning.

Implementation: ITS-TL, CTL, Facilities Services, the Registrar and the Associate Provost for Academic Initiatives will create a proposal for piloting new learning space designs during the 2007/2008 academic year. The proposal will be submitted to the Provost and the CIO by August 1, 2007.

- ITS-TL, working with faculty, students and IT staff from throughout the University, should establish test beds to pilot the use of emerging instructional technologies.

Implementation: ITS-TL will coordinate efforts to identify, implement and evaluate promising classroom technologies. Reports on pilot results will be produced by ITS-TL and pilot partners and disseminated as widely as possible. Prioritization of pilot projects will be based on potential campus impact, specific campus needs and research on IT trends and development.

- A set of guidelines for assessing learning outcomes and IT implementations should be created for use in all instructional projects with significant IT components. *Implementation: The Office of Institutional Research, in conjunction with CTL, ITS-TL and other interested parties, will recommend a set of assessment standards for IT-enabled instructional projects. The guidelines will be submitted to the Provost and CIO by January 1, 2008.*

- The Provost, in consultation with the faculty and relevant instructional support organizations, should develop an incentives program that supports faculty participation in strategic technology pilots.

Implementation: The Provost's Office and the CIO will jointly develop a proposal for a faculty incentive program by September 1, 2007. The proposal will then be presented to

faculty representatives for review. Those comments and recommendations will be returned to the Provost and CIO by January 1, 2008.

Prioritizing and optimizing instructional technology resources on campus

Demand for many aspects of academic technology support on campus is outstripping available resources. For example, many academic units are interested in developing interactive content, taking advantage of new online conferencing solutions, and exploring electronic portfolios and other alternative content management systems. While some initiatives may require additional investment on the part of the institution, simply advocating for larger academic technology budgets is not a realistic solution. A more prudent approach would be to begin taking a closer look at how current resources are being spent, to better integrate technology planning with institution-level instructional initiatives and to promote collaboration among campus support providers. The *Report of the E-Learning Task Force* urged that funding models for e-learning be scrutinized to assure that innovations in e-learning can be developed and, if successful, maintained.

Given resource limitations, how should instructional technology support be prioritized on campus? Most support organizations at the University strive to be as inclusive as possible, perhaps to a fault. This strategic planning process provides a framework for making difficult choices about how resources should be deployed. Decisions about expenditures on academic technology should be linked more closely with the institutional priorities and initiatives outlined in documents that strive to lay out a vision for the future of the University.

Using technology to further the University's commitment to high-quality instruction, for example, will require that more emphasis be placed on supporting high-impact outcomes like redesigned large-enrollment undergraduate "gateway" courses. In many cases, these redesigns are driven by curricular challenges like long waiting lists for popular courses, the need for more collaboration and interaction in large lecture classes, DFW/retention rates for minorities and other special student populations, curriculum enhancements like the SACS QEP, and instructional quality and consistency across course sections. Technology will likely have an important role to play in these efforts, but realizing institution-level gains in student learning is more dependent on strong leadership and creative pedagogy than technological innovation. The success of recent initiatives in gateway courses in the professional schools (e.g. Pharmacy) should be evaluated in this light in order to inform decisions taken elsewhere on campus.

Technology's role in advancing key academic objectives must ultimately be defined in the context of larger campus initiatives. Too often, the role of technology is considered after key decisions about an academic initiative have already been made. The potential of technology as a transformative agent will not be realized if it is only used to reinforce traditional instructional models and perspectives. Individuals and organizations with alternative perspectives should have a seat at the planning table from the outset. Otherwise, the tendency in most organizations, including the University, will be to adhere closely to the *status quo*.

The University can also optimize its IT expenditures by exploring economies of scale across academic units with common goals. For example, part of the University's education mission is to expand potential to reach new constituencies across the state and beyond. Because of the expense involved (in both hardware and time), it is crucial that all decisions to purchase and implement new systems to support these initiatives be informed not only by the needs and desires of the potential users within a single unit, but also by the experience and technological capacities of other members of the University community and beyond. Since much of this activity currently originates in the professional schools spread across the campus, oversight of such decisions would best be served by a coordinating committee comprised of the central and school-based IT professionals who support these systems under the guidance of a new academic study committee.

The University must also do a better job managing its instructional content. ITS needs to strengthen central learning management system technology so that content is more easily accessible and shared among courses and audiences. Digital content should be made available within a unified learning management framework that ensures appropriate levels of access and availability to various university constituencies. This framework should provide for the seamless delivery and reuse of these learning objects regardless of whether they are intended for residential, distant, or continuing education audiences. Currently, the multitude of instructional applications proliferating across campus makes access to instructional content confusing and complicated, not to mention making reuse nearly impossible. Design standards that allow content to be more easily shared and distributed should be promoted and supported among faculty and other content creators on campus. Open-source products offer more flexibility for addressing specific institutional needs, as was also noted by the *Report of the E-Learning Task Force*.

Finally, both academic technology support and general teaching and learning support would benefit immensely from a campus culture that promoted, recognized and rewarded collaboration among various support providers. Faculty and students are interested in quality services, not who provides them. There are a number of synergies to be tapped through increased information-sharing and formal collaboration. The most successful collaborations may require top-down coordination and resource allocation. University leaders should not shy away from such involvement when it involves important institutional priorities.

Recommendations

- Priorities for resources for instructional technology support should be driven by initiatives and projects with the highest strategic impact at the institutional and academic unit levels.

Implementation: ITS-TL, in consultation with members of the faculty and academic unit representatives, will present the CIO and Provost with a detailed list of central instructional technology support priorities by June 1, 2007.

- Technology application and planning expertise should be represented in major campus initiatives to improve student education.

Implementation: Before the summer of 2007, the CIO will formally communicate to the Administration and other campus leaders the importance of including IT expertise in key instructional improvement initiatives.

- A team drawn from ITS, the College of Arts and Sciences, and CTL will develop a coordinated proposal, informed by successful models elsewhere, to make effective use of IT to enhance pedagogy in “gateway” courses. The proposal will include a prioritized list of potential partners, cost estimates and a comprehensive assessment model to evaluate the impact of the IT techniques on student learning. It will draw upon evaluations of initiatives undertaken in professional schools such as Pharmacy.

Implementation: The team, selected and charged by the Provost and CIO, will develop a proposal by August 1, 2007. The proposal will be submitted to the Provost and CIO for further consideration.

- A University-wide committee charged to assess individual and institutional needs and potential uses for distributed learning systems should be formed, with representation from practitioners engaged in such educational projects as well as administrators charged with formulating policy regarding distance education. This committee would also work to insure that the systems we adopt do not exceed the IT capabilities of the constituencies we serve in distant locations. It will also serve as the UNC-CH liaison body for decisions regarding the University of North Carolina Online portal being established by the UNC General Administration.

Implementation: This sitting committee will be selected and charged by the Provost and the CIO before the summer of 2007, with a mandate to produce an operations protocol for assessment of distributed learning systems before the end of calendar year 2007.

- ITS, in consultation with faculty, students and campus other instructional support organizations, should explore the use of learning management systems that enable flexible and innovative pedagogy. *Implementation: ITS-TL, in cooperation with participating faculty and academic units, will pilot use of an open source learning management system for a course(s) during the 2007/2008 academic year.*

- The Provost, in consultation with the CIO and other campus leaders, should develop a plan for better integrating pedagogical and technical support organizations on campus.

Implementation: The Provost’s Office will convene a series of meetings with representatives from IT and pedagogical support organizations to discuss options for improved service integration. Those recommendations, produced by September 1, 2007, will be shared with the deans and directors of participating organizations.

Model 2: IT Partners -- A Pilot Project for UNC

Need

One persistent theme in our conversations with faculty members has been the need for IT experts who can work closely with academics in their efforts to strengthen teaching and research. We heard example after example of databases that lost their value for lack of IT know-how, of collaborations that floundered on problems of data sharing or communications,

of teachers who avoided computer-based innovation in the classroom because they could not afford the time to master difficult hardware and software. In the view of many faculty members, this need for IT expertise far exceeds the need for greater bandwidth or computing capacity.

Goals and objectives

The proposed pilot project is based on the premise that the efforts of our faculty members generally are better invested in academic work, not in the rapidly changing realm of IT. Even so, virtually all progress in modern research and much of the innovation expected in teaching will depend on effective IT. A skilled IT partner complements and extends academic expertise, helping faculty members accomplish things they otherwise would not.

Ultimately, our goal is to enable change and improve the university's leadership position by using IT to strengthen teaching and research. Specifically, the objective of the pilot project is to test the following suppositions:

1. A pool of talented IT partners will spur innovation and help our faculty achieve a new level of success.
2. An IT partner affiliated with ITS but based in an academic unit or cluster of units will work as part of a high-performance team, effectively leveraging the broader resources of central IT.
3. As IT partners working in various academic units meet regularly with their peers in central IT, they will share their successful strategies, propagating innovation campus-wide. (Once the university has a critical mass of these IT partners, their interactions will also enable interdisciplinary collaboration by providing a forum for airing common interests and resolving differences in data management, communications, and other activities related to IT).
4. An IT partner will function primarily as a generalist and will call in specialists as needed to address IT issues beyond his or her expertise.
5. IT partners will conduct the kind of training that imparts the basic IT literacy necessary for successful academic work, increasing competence and improving communication about IT campus-wide.
6. IT partners will become advocates for teaching and research within central IT and beyond, pushing for solutions and resources that enable positive change.
7. IT partners will foster better "IT citizenship," encouraging responsible conduct on university networks, realistic expectations about IT services, and a more positive atmosphere for collaboration.

Scope of pilot: four IT employees assigned to units selected from the natural sciences, humanities/fine arts, medical sciences, and social sciences.

Duration: at least two years. This will give the IT partners time to become fully integrated into the academic work and will allow for a meaningful evaluation of the project.

Examples of activities: The range of possible activities to which IT partners could contribute is enormous. They could, for example, support research-computing needs that range from consultations on data storage to software development to the installation and maintenance of high-performance computing clusters. They would also support a wide range of needs in teaching, including contributions to the development of courseware, distance education, and collaborative learning. A few specific examples might include:

- *Implementation of an electronic class response system for large lecture classes.* Electronic response systems that allow students in the class to respond to questions posed by the instructor and have their responses recorded are available from commercial vendors. The systems can be quite useful in large classes to promote student engagement and allow the instructor to assess whether or not key concepts have been understood by the students. However, implementing such systems is not trivial, since it involves both hardware and software issues and requires customization of a generic commercial interface to suit the specific instructional needs. The dedicated assistance of an IT professional would make it much more likely that more than one faculty member would make use of such a system. Use by multiple faculty members in a department would make it more likely that the use of such systems could be spread to other departments.
- *Use of simulations.* There exist many types of simulations in the natural and social sciences that require the manipulation and visualization of large-scale databases. Allowing students to use these simulations to pose “what if” questions can be of significant educational value, but producing an appropriate user interface and making it available on an available platform can be daunting tasks. An IT partner familiar with the database and with effective visualization techniques would prove invaluable, and the user interface might be replicable for other data sets involving similar protocols.
- *Multimedia.* Many educational encounters could be enhanced by the use of images, sound or video clips, or other media. However, locating, acquiring, editing, and presenting such media in a classroom context involves a welter of programs, protocols, and platforms that take significant time to learn and implement (not to mention the fact that they change constantly). Having an IT professional available to assist with such tasks, especially if the person were well versed in the kind of materials relevant to teaching and learning in the specific discipline, would make it much more likely that faculty would use such materials.
- *Data management.* Data sets must be regarded as significant long-term resources that require careful management. Often, researchers would benefit from IT help setting up appropriate structures and metadata needed for maximum utility. Standards for the collection, management, and presentation of data change rapidly, sometimes rendering older methods obsolete. Researchers must have clear pathways for moving their data forward from one application to the next, ensuring integrity in the translation. In data on human subjects, safeguards for privacy and confidentiality also are crucial. For astronomers, the challenge is to manage the enormous stream of data flowing from telescopes. In each of these areas and more, an IT partner could provide the necessary assistance and training.
- *Visualization.* In many fields, researchers must render complex data sets in visual representations that allow them to understand structures, patterns, and trends. IT partners could help teams develop this kind of visualization, including strategic areas such as geographic information systems (GIS) and the graphical modeling of biomedical processes.

- *Software development.* Increasingly, researchers demand new software to perform complex tasks. For example, biochemists at UNC have created software that renders protein folding in real time. Software of this kind, if developed with IT expertise, will help advance the field, enhance UNC's reputation, and help the research team attract new funding.

Appointments: We propose creating EPA non-faculty positions with joint appointments in ITS and the respective academic departments. Basing each IT partner primarily in an academic unit or cluster of units will ensure that the IT partner understands the subject matter, addresses the priorities of the unit, and works successfully as part of the academic team. Requiring a joint appointment in ITS will ensure that the IT partner benefits from a fruitful exchange with peers, receives meaningful evaluations on technical performance, applies best practices and adheres to campus standards, and promotes communication. Supervision of the IT partner should be shared between the academic unit and central IT, and the IT partners should be evaluated on their ability to work effectively in both environments.

Qualifications: We recommend that the IT partners have academic credentials in the discipline in which they will be based. There is likely to be a good supply of candidates for such posts. Often, recent PhDs, postdoctoral fellows, and others find that they prefer to work in IT rather than in teaching and research. The candidates also should possess the knowledge, interpersonal skills, and aptitude necessary to work as an IT generalist, with demonstrated abilities in areas of strategic importance to the units involved. In some units, for example, the emphasis may be on database development and programming; in others, the greater need may be in instructional media or visualization.

Funding: The EPA positions envisioned would require both academic and IT credentials and must therefore be funded at the level of assistant professor or higher. While new resources almost certainly will be needed to establish these positions, several options exist for sustaining them long-term:

- *Departmental contributions:* Academic units in which an IT partner increases productivity and elevates the reputation of the department will be inclined to contribute substantially to the position.
- *Reallocation from central IT:* Some resources devoted to staff in central IT units could perhaps be reallocated into IT-partner positions. This actually could benefit central IT operations by improving communication and by increasing resources and support for IT campus-wide, reducing the central management burden.
- *Grant funding:* At present, most funding agencies generally do not allow grant funds to be used for basic IT services, which are presumed to be covered in the facilities-and-administrative charges (overhead) applied to the grant. However, an IT partner with appropriate academic credentials can contribute substantively to the work and could in some cases be paid on one or more grants.

Expected benefits: The primary benefit of the pilot project will be information about the validity of the model, as measured by evaluation. If the pilot proves successful, the model could gradually be scaled for use campus-wide. In fact, the efficiencies and benefits of this model are likely to increase as the number of IT partners on campus reaches a critical mass.

On a larger scale, each IT partner and his or her respective unit would draw on the vast set of talents and skills represented among numerous IT partners, benefiting from many possible examples of successful solutions and innovations. This kind of model, which depends on a large network of subject-matter specialists linked by mutual interests, motives, methods, and goals, can foster rapid, beneficial change. Lessons learned at one node of the network are quickly diffused to the rest.

It is very difficult to predict the next wave of revolutionary change in hardware or software, or its implications for academic work. But we can predict that whatever the revolution might hold, UNC will need skilled, creative IT professionals who can anticipate the wave, exploit its potential, and extend its benefits to the campus community. If UNC expects to achieve a position of leadership among modern research universities, we will have to invest in those talents, and deploy them in a new kind of model, one in which the IT professional is truly a part of the team.

APPENDIX D – Distance Education Task Force Report

Excerpts from: Report of the Distance Education Task Force

University of North Carolina at Chapel Hill

February 16, 2007

Distance Education and Online Learning Principles

- Distance education sponsored by UNC-Chapel Hill is most appropriate for students who seek graduate or professional licensure, certificate and degree programs. Although our College of Arts and Sciences does not foresee offering degree programs through distance education, we recognize that offering professional undergraduate degrees (e.g., the BSN) and individual undergraduate courses is of value and consistent with the public service mission of the University.
- Distance education is likely to be most effective when it includes regular interactions with instructors and is enhanced by opportunities for face-to-face instruction. For these and other reasons, distance education is not the optimal way to educate traditional UNC-Chapel Hill undergraduates.
- While distance education and online instruction can be effective at the level of both individual DE courses and degree/certificate/licensure programs, UNC-Chapel Hill has substantial strength in and should emphasize the latter.
- Distance education and online instruction faculty characteristics should parallel similar programs on campus. Faculty should not be segmented by their instructional techniques.
- Distance education and online instruction evolution should be related to campus instructional and pedagogical innovations. Investment in program development and updating, delivery and evaluation are necessary if DE programs are to be state-of-the-art and sustainable.
- Creation of online instruction is enhanced by open-source instructional technology development.
- Distance education and online instruction programs offer research opportunities on the best methods to develop, deliver, and assess learning outcomes across a wide array of hybrid and multi-dimensional delivery formats.

Recommendations

The Task Force recommends several steps to achieve greater efficiency and effectiveness in online instruction. While addressing these issues might seem beyond the purview of our committee, if the UNC system wishes to encourage development of new online programs, resources must be provided to develop and sustain such programs. Because standards for the

quality of DE are rising, entry costs may be prohibitive if each school within the University or, indeed the UNC system, builds its own infrastructure for online instruction. Successful programs also require regular updating, a process that can incur significant costs when distance education methods are used.

Expand graduate and professional distance education opportunities to provide greater educational access for mid-career students—Developing new and expanded programs using state-of-the-art techniques will help fulfill UNC-Chapel Hill’s educational mission by expanding access to a wider set of students. In professional schools where students are being prepared for specific careers, DE programs at the undergraduate level can reach targeted, high-need communities.

Encourage the most effective models of online instruction—These models are likely to use hybrid courses in seamless classrooms. Enhanced video and audio telecommunications infrastructure, both nationally and worldwide, offers an opportunity to bring synchronous instruction to students on and off campus. The University could reduce the distance between off-campus and on-campus students by bringing distance education students into classrooms for selected programs. (Pharmacy and Public Health have been developing these hybrid approaches.) The mixture of such groups could be fruitful as students with significant professional experiences encounter students in our residential programs. Such a seamless classroom approach can close the gap in distance and time and thus may be especially important in global education. The expansion of hybrid models could permit UNC-Chapel Hill to serve as a laboratory for the most promising distance education approaches. Those that prove effective could be offered through the University of North Carolina Online portal. For this to occur, resources for development, implementation and evaluation must be available.

Invest in core resources to support distance education—Provision of various core resources could help the University achieve economies of scale in DE. Such core resources could include support for course management systems, multimedia kitchens, instructional designers, student support services, telecommunications, and interactive technologies. The biomedical sciences have shown that judicious use of core resources to deliver services, such as genetic sequencing, can enhance quality, increase access, and reduce duplicative investments. A similar practice of investment in core resources that could serve many potential users across the campus could be applied to investments in online instruction.

Develop and use evaluation protocols and services—Rigorous evaluation programs to assess quality of all curricula, whether delivered face-to-face, using distance education, or combinations of these, are essential. The campus should continue to apply standard, validated approaches to assess the quality of Carolina programs, irrespective of mode of delivery.

Funding model—Creation of new DE programs requires substantial effort and funding. As students become more sophisticated in their use of various technologies and their expectations about the quality of graphics, animation, and other learning devices increase, the cost of development will increase as well. Funding models for DE at UNC-Chapel Hill should be scrutinized to assure that innovations in DE can be developed, and that successful programs can be maintained.

Participate in the open-source community—Open source should be an underlying principle for our distance education efforts. UNC-Chapel Hill is a strong participant in the open-source movement through Computer Science, SILS, and iBiblio, but we have not participated in the

open-source distance education community to share technologies (e.g., Sakai, Moodle). Education is the very core of our mission, and the context of online instruction calls on us to participate in the direct development of technologies that serve teaching and learning. The definition of features and functions of our learning technologies should be controlled by our campus and its peer institutions. The open-source approach offers a method for our participation in that process. We are encouraged that GA has expressed strong interest in assisting campuses to investigate open-source and open-platform instructional technologies.

Confirm principles for distance education initiatives at UNC-Chapel Hill—As GA has articulated, each university in the UNC system will retain autonomy with regard to standard-setting for its campus. This includes determining who is eligible for admission to degree, licensure and certificate programs, what requirements must be met for particular programs and degrees, who is eligible to teach and what standards are held regarding quality. Related to autonomy is our wish to review UNC-Chapel Hill materials that are being used to promote University of North Carolina Online or other educational programs to assure that they are consistent with our mission and practices. A representative who can speak on behalf of UNC-Chapel Hill should be an integral part of planning, implementing and evaluating the portal.

Conclusion

Technologic advances that enhance teaching and learning offer UNC-Chapel Hill new opportunities on campus and beyond. The initiative of GA to bring system-wide resources and focus to serve a wider array of students through the University of North Carolina Online portal will help North Carolina meet 21st century challenges. Our campus will continue to work with its sister institutions to honor its commitment to the state and nation to educate students at all collegiate levels. Innovations in teaching and learning are essential to being one of the very best universities anywhere, and we are committed to developing, applying and evaluating distance education innovations. We must do so in ways that are consistent with our mission. We look forward to working with GA to develop approaches that will enhance teaching and learning for all our students no matter their