

UNIVERSITY OF MASSACHUSETTS
Information Technology Council
Subcommittee on Academic Technology

Vision and Plan, Phase 2
Integrating the Vision for Learning and Technology at UMass

December 2006

In the Spring of 2005, the Subcommittee on Academic Technology (SAT) ¹ completed *Academic Technology for Teaching and Learning[:.] Vision and Plan*. The so-called Vision/Plan reasserted the centrality both of teaching/learning and technology in the academic life, recognized advances the University had already achieved, and identified preliminary steps toward realizing the following vision for 2015:

The University of Massachusetts is recognized as a leading university in using academic technology to improve teaching, learning, and scholarly interchange, and in evolving its role as a university in an information age society.

The Vision/Plan established the following Goals for Year 1:

1. Achieve buy-in for this initiative from all parties.
2. Hire the Associate Vice President for Academic Technology.
3. Establish effective governance for the virtual learning environment being operated by University Information Technology Services (UITS) for UMassOnline and the campuses.
4. Establish work groups [Assessment, Course & Curriculum Redesign, Faculty Engagement & the Scholarship of Teaching & Learning, Physical & Virtual Learning Environments, and Support Services].
5. Establish task forces to make recommendations concerning:
 - a. The role of teaching in the promotion and tenure process.
 - b. Faculty development efforts on the campuses.
 - c. Maturity models appropriate to guiding and assessing the evolution of teaching and learning.
 - d. Deferred maintenance issues for existing classroom buildings (Vision/Plan, 2005, page 10).

Goal 1 was addressed during the first half of 2005 through discussions on each campus involving SAT members and campus based faculty and staff; through extensive discussions with, and feedback from, the Provosts and CIO's; and ultimately via the endorsements of the Information Technology Council, campus

¹ The Subcommittee on Academic Technology comprises faculty and staff from the five UMass campuses, UMassOnline, and the President's Office. It is charged with facilitating the development and implementation of a vision for effective utilization of technology in teaching, learning, and scholarship at UMass.

Provosts (campus Chancellors, the Senior Vice President for Academic Affairs, Student Affairs, and International Relations (Marcellette Williams); the Vice President for Information Technology and Chief Information Officer (David Gray), and the University of Massachusetts President Jack Wilson. The SAT recognizes the critical value of the campus discussions' favorable outcome and the formal endorsements. We also recognize that true institutional buy-in *begins* with such endorsements. As this report will document, the kind of buy-in that would signify institutionalization of the Vision/Plan is understandably a work in progress.

The Associate Vice President for Academic Technology (Goal 2) was hired on an interim, half time basis through August 2005. In September 2005, the position took on regular, full-time status. The AVP co-chairs the SAT, coordinates symposia and special interest groups, works with campus faculty on initiatives related to enhancing teaching through the use of technology, works with the Associate Vice President for Academic Affairs on issues of mutual concern (e.g., assessment, copyright, STEM), administers the Academic Technology Grant program, sits on the Information Technology Council and the Continuing Education Council, and provides information resources for campuses. In the spirit of integration fostered by the Vision/Plan, he reports jointly to the Senior Vice President for Academic Affairs, Student Affairs, and International Relations and the Vice President for Information Technology and Chief Information Officer.

Relative to Goal 3, UMassOnline has established an "eLearning Cabinet" involving faculty and staff across the UMass System. The Continuing Education Council is actively discussing issues with implications for the UMassOnline governance and its "business model," including the emergence of *blended learning* in the publicly supported curriculum. In the near future, UMassOnline will establish an advisory board to focus the discussion on such issues and the implications for the future role and organization of UMassOnline.

The Working Groups mandated in Goal 4 began operation in October, 2005. Each was charged with reviewing current practice in its area, including exemplars within the UMass System, with identifying needs, and making recommendations for the short and long term. Much of the report that follows emerges from these groups' activities and reports.

Goal 5 was not addressed. In the early stages of implementing the first full year after the Vision/Plan's adoption (forming the Working Groups, planning symposia and related activities, we came to believe that the issues embedded in Goal 5 should await the Working Group activities.

This report is a weigh station in the process. The report briefly summarizes activities of the past year. Building on the Working Group recommendations, the report offers a digest of what is needed broadly to continue progress toward the vision articulated a year and a half ago. It then proposes more specific objectives, realizable over the next one-to-five years. In doing so, it attempts to make more accessible those goals that bespeak futures states of mind and being (e.g., "a culture of scholarship of teaching and learning") through more concrete strategies, actions, and gauges of progress. Much of the evidential detail is contained in the Working Group Reports, which are available at www.massachusetts.edu/itc/satinitatives.

Vision/Plan Related Activities, March 2005 - November 2006

The SAT coordinated, sponsored, or was heavily involved in three major types of activities aimed directly at enhancing teaching/learning with technology, furthering faculty engagement, and advancing the planning effort.

Enhancing Teaching and Learning with Academic Technology

Three large-scale symposia engaged faculty and staff from across the University in an exploration of tablet PC's (March 30 - April 1, 2005), electronic portfolios (September 23, 2005), and technology's role in the assessment of learning outcomes (April 7, 2006). Each symposium drew at least 80 faculty and staff, and featured a highly accomplished keynoter (Charles Grisham, tablet PC's; Trent Batson, ePortfolios; Steve Ehrmann, assessment). It appears that, at least with respect to ePortfolios, the symposia have advanced campus-based activities.

In addition, we were a licensed site for two web seminars, one on copyright and intellectual property and the other concerning electronic portfolios. And we established a special interest group on ePortfolios to share information across the campuses.

Furthering Faculty Engagement

In addition to symposia, web conferences and SIG's, the SAT administered the grant program, "Enhancing Teaching and Learning Through the Use of Technology." This program more than doubled the former "Professional Development Grants" in awards (\$220,000) and established a new category of awards, "Strategic Initiative Grants." Proposals in the Strategic Initiative category had to demonstrate applicability to the Trustees' Strategic Initiatives as well as the Vision/Plan, and a scope beyond the applicant's own professional development as a teacher. Typical Strategic Initiative Grants involved ePortfolios, tablet PC's, and multimedia ventures.

The Planning Effort

Cross campus working groups examined the current and desired future states of Assessment, Course & Curriculum Redesign, Faculty Engagement & the Scholarship of Teaching and Learning, Physical & Virtual Learning Environments, and Support Services. In addition, the SAT, in collaboration with UMassOnline and the President's Office, sponsored cross-campus symposia on electronic portfolios and assessment. And the committee presided over a significantly expanded program for Enhancing Teaching and Learning through the use of Academic Technology. The SAT also monitored parallel or complementary endeavors on the Continuing Education Council and at UMassOnline and, through the office of the Associate Vice President for Academic Technology, worked with campus groups on issues related to innovative teaching and technology (e.g., tablet PC's, electronic portfolios, strategic planning).

In addition, SAT members investigated the possibility of establishing either notebook or tablet PC mandate on campuses or, short of that, an enhancement of clarity with respect to the threshold expectations for hardware/software platforms for students and faculty. The matter remains under exploration.

The Working Group Recommendations Synthesized

Each Working Group generated recommendations that ranged from the atmospheric to the very specific. Appendix A contains a digest of Working Group recommendations. On September 22, the Working Groups joined in a "Summit"; cross-group teams generated recommendations of a range equivalent to those of the Working Groups. Those priorities appear in Appendix B, undistilled so the reader can identify redundancies across the groups. These redundancies indicated major, shared concerns, and thus helped point the way for focusing our next steps.

The recommendations call for enhancements in two broad categories: **Institutional Integration of Teaching, Learning, and Technology**; and **Support for Teaching, Learning, and Technology**. To advance and sustain progress in these areas, the recommendations call for benchmarking and continuous **assessment** and for a number of **collaborative processes**. These themes suggest an implicit causal chain. The ultimate goal is effective learning. Learning is enhanced when faculty can effectively engage in exploring and experimenting with teaching/learning. Such engagement requires adequate support, which includes appropriate infrastructure and human support, encouragement to explore and assess one's explorations, and rewards for success in these endeavors. And such support proceeds from integration into the life of the institution. The need for collaboration and continuous assessment arises from the complex and rapidly changing circumstances of learning and technology. Successful adaptation in such an environment necessitates constant stock-taking. And no one group can fail to benefit from the expertise and experiences of the others.

Institutional Integration of Teaching, Learning, and Technology

Organizational structures and processes should bespeak the centrality of teaching, learning and technology. Integrating teaching, learning, and technology in the institutional life covers several dimensions. Among the imperatives identified by the Working Groups are the following:

1. Assure that learning and technology issues are infused in strategic planning.
2. Assure that centers for the improvement of teaching and agencies involved in providing technology training for faculty either merge or work closely together (i.e., that teaching, learning, and technology are integrated *among themselves*).
3. Assure a strong academic presence in policy issues involving learning and technology, through:
 - a. Staff reporting to the Provost;
 - b. Faculty representation on committees concerned with academic technology.
4. Provide mechanisms for cross-functional communication and collaboration (e.g., between IT and the academic enterprise; providers, users, and trainers).
5. Provide resources indicative of the relative importance of teaching and learning, and the role of academic technology in enhancing teaching and learning.

Support for Teaching, Learning, and Technology

"Support for Teaching, Learning, and Technology" incorporates the direct provision of support services (e.g., training and assistance). It also includes physical infrastructure and organizational processes that encourage and reward faculty for the following endeavors: effective teaching; increasing understanding of teaching and learning for themselves and others; and enhancing teaching through the use of academic technology. The Working Group reports focused on critical needs in the areas below.

Support Services. "The front line." "Where the rubber meets the road." "The trenches." Clichéd as these phrases are, they uniformly connote the intensity of the teaching/learning/technology experience when things go well and when they don't. The Working Group on Support Services deliberated the conditions that exist on both occasions. Many of the group's specific recommendations trace back to the placement of support services in the organization -- i.e., how the support service function is integrated in the hierarchy, with IT, and the academic side.

Staffing levels also came under discussion. Support personnel serve continually more faculty, more staff, more students (at most of the campuses), more courses, more sections, and more technologically enabled classrooms. No letup is in sight. The adoption of learning management systems, electronic portfolios, video capture technologies, podcasting modalities, and other rapidly emerging tools puts more pressure on the campuses' ability to train users and assist them. It may be that there are not enough staff. It may be that they are not placed optimally. But there is a universal sense that the very capable individuals providing service on all the campuses are stretched thin.

The SAT cannot presume to recommend specifically how each campus should address the issue of staffing levels and placement. We do, however, believe that the following actions could greatly assist the provision of support services appropriate for the times.

6. The University should study and benchmark staffing levels in support service functions at peer institutions.
7. Campuses should consider the best ways to organize support services.
8. The University should encourage opportunities for support services staff to share expertise and technology use across campuses
 - a. To this end, we urge a return to the level of intercampus support service collaboration that existed under the SAT's earlier instantiation, the Technology for Academic Development Subcommittee.
 - b. We also urge a closer look at hardware and software applications, as well as staff expertise, that could be shared across campuses in the interest of effectiveness and efficiency.
9. The University should encourage the establishment of thresholds for hardware and software. Where possible, such thresholds should apply across campuses in the interest of purchasing power and the provision of support. (The establishment of clear standards would not only benefit support services staff; it would afford greater faculty and student understanding of what is expected in the physical or virtual classroom.)

Faculty Engagement and the Scholarship of Teaching and Learning. If Ernest Boyer's *Scholarship Reconsidered: Priorities of the Professoriate* (1990) did not launch initiatives to place the exploration of teaching and learning at the center of the faculty life, the decade and a half since its publication has seen intensified concern for this priority. At the same time, however, it appears that pressure on faculty to publish in areas that bring recognition in the discipline and economic advantage to their campuses is seen as competing with the teaching/learning priority. It is commonplace, and perhaps unfair, to reduce the issue to one of opposing priorities. Must scholarship that is prized in the academy compete with the faculty members' development as a teacher? Can scholarship on teaching and learning be encouraged and valued?

Accurate or not, a common perception holds that the answer is "yes" to the first question and "no" or "maybe" to the second. Junior faculty report that they cannot take part in teaching development activities because they must satisfy the foremost concern of their probation, research and publication; moreover, their research and publication frame typically extends the pattern established in graduate school and before, where teaching and learning were likely not a matter of professional concern. The question, however, should not be how to reify the value of inquiry into teaching and learning at the expense of the value of inquiry not directly concerned with pedagogy. There should be no disagreement that scholarly inquiry in general enhances teaching and learning.

At the same time, we completely agree with the proposition that we should do more to promote the value of inquiry, including scholarly inquiry, into teaching and learning. And in this new century, such inquiry will frequently involve academic technology in two ways. First, the impact and effective uses of the technology is a target for inquiry. Secondly, new academic technologies can greatly assist the inquiry process.

Here are actions that could move the University closer to engaging faculty more intently in teaching, learning, and technology issues and fostering opportunities for scholarship in this area.

10. Enhance incentives and rewards for inquiry into teaching, learning, and technology.
 - a. Continue and enhance the Academic Technology Grant Program.
 - b. Revisit current mechanisms for assessing teaching and learning, including Annual Faculty Reports, Academic Quality Assessment and Development, and the Periodic Multi-Year Review to examine how 1) reporting on initiatives to develop teaching and enhance learning -- in general and through the use of technology -- might more meaningfully occur; 2) how the use of technology might make the effort less cumbersome for faculty and administrators, while enabling greater linkage between teaching activities and program review.
 - c. Study the development of criteria for the Scholarship of Teaching and Learning in the tenure and promotion process.
11. Provide avenues for inquiry and dissemination.
 - a. Establish an electronic repository of peer reviewed writing on teaching, learning, and technology
 - b. Include peer review and dissemination in UMass System-wide professional development opportunities.

12. Promote the importance of faculty engagement and the scholarship of teaching and learning by celebrating achievement in the scholarship of teaching, learning, and technology, as well as in teaching in general.

Infrastructure. We have previously discussed staff support and other measures for effective deployment of technology, including thresholds and the sharing of infrastructure. Reviewing the original Vision/Plan, the report from the Working Group on Physical and Virtual Learning Environments, and the report from the Working Group on Support Services, we note again the theme of integration. Each document speaks almost in one breath about the machines and their larger human and physical environments. The following recommendations are thus less technical and more procedural. If we can enhance the manner in which we explore, deploy, and manage technology, the machines can do the rest. The following steps are recommended.

13. Establish best practices and classroom standards, seeking commonality across campuses where possible.
14. Promote better connectivity across campuses, with standardized logins and a portal.
15. Enhance ongoing R&D across campuses:
 - a. Broker hardware software trials and comparisons.
 - b. Absorb risk for technologies that lack staying power.
16. Establish and maintain standards for hardware/software maintenance and upgrades, seeking commonality across campuses where possible.
17. Assure that a significant number of classrooms (70-80%) are technologically enabled.
18. Explore the implications of blended learning for deploying technologies in online and/or face-to-face environments.

Generic Processes: Assessment and Collaboration

A Working Group focusing on the topic generated several recommendations concerning the **assessment** of teaching, learning, and technology. In addition, each of the other Working Groups raised the need for assessment and continuous quality improvement. Many of the recommendations already raised above either imply or directly reference assessment. Each is subject to continuous review.

We would like to observe that 'assessment' is as much a way of being and behaving as it is a formal process. Its ultimate purpose is to strengthen that which is assessed. Assessment seeks not to judge but to understand how to make things better. It functions best, then, under conditions that reward questioning and exploring; it functions poorly when seen as a threat. The current atmosphere of intensified accountability for postsecondary institutions offers an occasion to make assessment work to the advantage of campuses and their constituents if we can focus on the opportunity rather than the threat.

We believe that the following steps need to occur to strengthen the University's ability to understand and continuously improve how it teaches and how students learn with technology.

19. Incorporate assessment of student learning in campus strategic plans.
 - a. Identify mechanisms for continuous quality improvement in curriculum and instruction.

- b. Provide the means to select appropriate tools and train faculty and staff to use them effectively.
 - c. Seek to integrate assessment of student learning with assessment at departmental program and institutional levels.
20. Provide incentives for assessment.
- a. Highlight exemplars.
 - b. Provide informational and expert support for assessment.
21. Assess progress toward the SAT vision.
- a. Establish process.
 - b. Identify measures of quality improvement.
 - c. Take measures and feed back.

Several of the Assessment Working Group's recommendations involved cross-campus **collaboration**, as did the recommendations of the other Working Groups. Complexity, rapid change, staffing and other resource shortages. . . these all argue for the sharing of knowledge, expertise, and even equipment. Here is a digest of collaborative activities we should undertake, in addition to some already noted (e.g., sharing of infrastructure).

22. Foster intercampus communication
- a. Provide opportunities for advice and information sharing
 - b. Offer improved technologies for sharing information, in the manner of Groove or SharePoint
23. Share knowledge and expertise.
- a. Continue symposia and conferences.
 - b. Establish and maintain special interest groups.
 - c. Create a portal that provides easy access and accentuates cross-campus issues.
24. Enhance inquiry into teaching, learning, and technology.
- a. Provide a resource bank of materials and writings on the subject.
 - b. Explore the establishment of peer-refereed outlets for dissemination of findings.

We conclude our synthesis of the Working Group recommendations with the sobering reflection that a roster of more than 20 recommended steps seems ungainly and even massive. However, many of the recommendations are reasonably concrete, and some are already implemented in various stages of maturity. In the next section, we propose implementation steps and a broad timetable for moving forward.

Next Steps and Thereafter

In the coming weeks, the SAT will provide a slate of tasks and with a timetable. The document is under development, and will offer specific actions to take and issues to address. Many of these actions and steps will be discussed with the SAT's parent agencies and officers (the Information Technology Council, the Academic Advisory Council, Senior Vice President Williams, and Vice President Gray) before finalization.

Sources

Information Technology Council Subcommittee on Academic Technology (2005).
Academic technology for teaching and learning[:] vision and plan. Boston:
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Boyer, Ernest (1990). *Scholarship Reconsidered: Priorities of the Professoriate*.
Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Reports and Recommendations from the Working Groups on Assessment, Course &
Curriculum Redesign, Faculty Engagement & the Scholarship of Teaching &
Learning, Physical & Virtual Learning Environments, and Support Services.

Appendices

- A. Digest of Working Group Recommendations
- B. Digest of Summit Recommendations

UNDER SEPARATE COVER

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