

Ad Hoc Technology Committee Final Report--May 4, 2000

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***See attached Minority Report**

Mandate

Interim President Carl Vogt created the Ad Hoc Technology Committee in December 1999 to examine two large issues:

- 1) whether and how the College should involve itself in the creation of for-profit distance education / on-line courses; these issues were raised by the specific proposal from the Global Education Network;
- 2) how issues of intellectual property should apply to faculty and/or College involvement in the creation of on-line learning materials.

Overview: what we did and where we came out

The committee approached its task via an enormous amount of research, reading, and discussion, including

- a presentation on campus by Robert Mittelstaedt, Vice Dean and head of the Executive Education Program (a distance learning program) of the Wharton School
- a presentation by committee member Ed Burger of the calculus and pre-calculus "virtual textbooks" he created for Thinkwell.com
- two presentations on campus by GEN (the second open to all interested faculty and attended by about 40 people)
- a general discussion of distance learning on the floor of the March 15 Faculty Meeting
- a meeting in Boston with representatives of other schools considering the GEN proposal (Brown, MIT, Cornell, Dartmouth, Wellesley, Williams), attended by Helen Ouellette, Vice President of the College and committee member, Cappy Hill, Provost of the College, and Sherron Knopp, Co-Chair of the committee

A select annotated bibliography is attached to this report.

Our discussions began with a focus, prompted by the GEN proposal, on distance learning and on-line courses. After considering and critiquing as many roles and benefits as we could imagine for Williams College in the current "hot" distance-learning market, we emerged nearly unanimous in our skepticism about the appropriateness and viability of on-line *courses* as an enterprise that the

College should engage in, at this time. At the same time, we found ourselves much more enthusiastic, and nearly unanimously so, about the effectiveness of web materials as supplements to classroom teaching. What follows is a brief summary, first, of our conclusions about distance learning and on-line courses and the recommendations that we arrived at, and, second, a summary of our conclusions and recommendations about the creation of web materials as "virtual textbooks" rather than "virtual courses."

I. On-line Courses

Substantial revenues?

While some members of the committee found the baldly commercial profit motive objectionable and incompatible with the College's educational mission and its non-profit status, all of the committee members were persuaded that the kinds of enormous profits GEN anticipates and promises are *not* going to materialize from marketing liberal-arts courses on the web. The evidence from actual experience confirms overwhelmingly that the expense of mounting and maintaining such courses exceeds profits by a considerable margin. On-line courses are extremely expensive to produce (UK's Open University spends US \$3 million per course, according to GEN's Alexander Parker), and GEN's Shana Fisher calculated that GEN would need 2000-3000 users to cover the costs of a single complex course. But on-line courses are also *more* time- and labor-intensive than traditional courses and require an even smaller student/faculty ratio to create a "high quality" equivalent of the classroom experience, according to the University of Illinois Report (p. 3). The frequently imagined audience of "hundreds or thousands" of students waiting to enroll in such courses, however, simply does not exist. The University of Illinois Report is adamant on these points, as was Dean Mittelstaedt in his presentation to the committee.

What audience, what purpose?

In its discussions of on-line courses, the committee found itself continually hard pressed to come to any concrete conclusions about what goals or audiences the College might/should pursue in the distance learning market. Potential audiences for high-quality on-line courses might include advanced high school students, mature working students, or retired senior citizens. Some members of the committee believed that serving these audiences would be a natural extension of the College's core mission while others disagreed, but the committee was almost unanimous in believing that on-line courses would be a particularly inefficient and ineffective way of expanding that mission.

On-line courses for alumni seemed a more plausible project, but the extent of alumni interest in full *courses* also seemed extremely dubious to the committee. Wendy Hopkins, of Alumni Relations, told us that a very large number of alumni expressed interest in Mark Taylor's web course (Psychology and Religion) when it was offered to them. Two hundred pre-registered. But the number of participants decreased over the course of the semester, in part because of the difficulties of the course and the realities of time constraints. Wendy remains "very interested" in on-line educational opportunities for alumni through material designed specifically for the web, and significantly shorter than a semester (perhaps only four hours long).

It was not clear to the committee that the College, as an institution, should commit the time and energy of its faculty to making such courses for any of these groups. The committee's difficulty in articulating a compelling rationale or purpose for institutional involvement in the distance-learning market turned out to be the common experience of all the schools that met in Boston to

discuss their responses to the GEN proposal. Not a single institution was anywhere near ready to "sign on" with GEN. There was some sentiment for continued discussions with one another, and perhaps with additional schools, to try to determine what each institution might want to accomplish, both individually and collectively, through a distance learning program. Having a clear goal and purpose was deemed an essential pre-condition to signing on with any company.

Quality and effectiveness?

More than anything else, the committee found itself questioning again and again the quality and effectiveness of on-line courses, given the present state of technology. From the beginning we agreed that one could not simply tape a classroom lecture and transfer it to the web (the "talking head" model)--even with extra windows for charts or animations or question-and-answer sections or further links--although this is essentially the sort of prototype that GEN showed us. We also became increasingly convinced that on-line materials cannot presume the same kind of attention span as a classroom lecture, and need to be packaged into smaller units or "modules" than the standard 50- or 75-minute "lecture." The on-line "course" itself probably needs to be *much* shorter than the traditional semester-long course. One or two members of the committee remain convinced that technology will ultimately make on-line courses *more* effective than the "live" classroom experience. They felt convinced that GEN's prototype had enormous potential, that GEN itself was willing and eager to experiment, and that GEN's money and technology would provide unmatched opportunities for faculty interested in "real and substantial experimentation" in on-line education--much more so than the resources of a single institution could provide. Most committee members, however, were not impressed with GEN's "unimaginative," "clunky" prototype or with GEN's apparent lack of interest in producing anything but the equivalent of regular semester courses.

On-line courses: conclusions and recommendations.

- Because technology is changing so rapidly, and the effectiveness of on-line education with it, we recommend that the College not rush to make an institutional commitment to a single company simply for the sake of not missing an educational "revolution" whose shape is impossible to see, much less assess. It should hurry even less for the sake of huge profits, which will almost certainly not materialize.
- The best course for the College, in our view, is to leave individual faculty free (as they are now) to enter contracts to produce on-line courses and to accumulate experience with a whole range of resources and formats. The "Intellectual Property" section of this document suggests some general guidelines to govern faculty activity in this area. If the College at some future date can articulate a more compelling mission for itself than it can now in the field of distance learning, it will then have the benefit of more experienced and better informed faculty to advise it.
- Continued discussion by a smaller, more self-selected group than the present committee may also be more successful at articulating a compelling mission for the College. Such a group should be established not as an "ad hoc" committee, but as a standing committee with a general oversight of technology and the curriculum, including distance learning.
- The College may also want to continue to meet with representatives from the GEN schools, or with a different group of schools more like itself (Wellesley, Amherst, Swarthmore) to explore possible goals and benefits from a distance-learning consortium. Insofar as the "brand names" of a group of elite institutions are an extremely valuable market commodity

(and a large part of the rationale for GEN's proposal), a group of elite institutions willing to market their combined names in a common enterprise will have backers lining up to take advantage of what they have to offer, and will be able to set its own terms.

II. "Virtual Textbooks"

While most members of the committee were not persuaded by the promises of on-line courses to equal, surpass, or replace what happens in the traditional classroom--at least not in the present state of technology--there was nonetheless nearly unanimous enthusiasm for the use of web material as a supplement to classroom teaching--e.g., as "virtual textbook" rather than "virtual course." For many members of the committee, Ed Burger's calculus and pre-calculus materials (produced for Thinkwell.com) provided an attractive alternative to the models GEN seemed to be developing. They were filmed in a studio, with Ed consciously adapting his classroom style to the more intimate setting of someone sitting alone at a computer watching a small screen. They presented a series of short units on specific topics, with bright and effective animations to illustrate abstract principles. They were conceived less as stand-alone "courses" than as supplementary materials, or "virtual textbooks," for a course. Using the material in one of his own courses, Ed found that the web materials eliminated a lot of the need for lecturing, and freed up class time for more productive work on the kinds of problems that the students would normally have been doing as "homework"--without supervision or feedback. Instead of substituting for the traditional course, the web material enhanced the quality of actual class time.

Obviously, the multi-media resources of the web and its effectiveness as a vehicle for "information delivery" have more relevance for some courses and some levels of courses than for others. One committee member felt adamantly that on-line materials add "shinies and glitz," but do not necessarily "improve what we do." Another argued that "shinies and glitz" would be an irrelevant and inappropriate distraction from what some courses do: a poetry or philosophy course will always be about the poem or argument on the page, and about the dynamics between student-teacher-book.

Nevertheless, the potential for on-line material to be packaged into supplemental modules for many regular courses--serving as a kind of extended "super" textbook--elicited much heartier interest and excitement than any of the discussions of on-line *courses*. One committee member speculated wistfully about the possibility of a proposal from GEN or some other company to create web "modules" to supplement existing courses currently being taught. Materials developed might ultimately be made available, for profit or not, to a larger audience, for use in other schools or courses, but the first priority of the College's interest in technology should be to improve and enhance teaching on campus to regular students.

The committee felt strongly, and almost unanimously, that faculty need more help and support on campus to pursue technological projects related to curricular development. With OIT clearly understaffed and over-extended, on the one hand, trying to do too many things for too many people, from fixing printers to helping people with passwords, and CTAH, on the other hand, suffering from an esoteric and rarefied image, the College lacks any locus for coherent and consistent oversight of the role of technology in curricular development. The committee therefore decided to make a second set of recommendations.

"Virtual textbooks": conclusions and recommendations.

- Create a position, and hire someone to fill it who would be devoted entirely to the development of technology and the curriculum. Make this position an instructional one, and use it to strengthen OIT by making this person head of the Instructional Technology. Alternatively, separate this position from OIT and make its occupant answerable to the Dean of the Faculty.
- Consider broadening the scope and mission of the Center for Technology and the Humanities. Make it available and accessible to all faculty by transforming it into the Center for Technology and the Curriculum. Create a close connection between this Center and the person holding the position described above. Stipends alone are not sufficient support for faculty in integrating technology into the curriculum. Faculty need technical support staff to create and maintain materials to be developed.
- More important than the preceding recommendations, and prior to them, it is imperative that the College's technological infrastructure be adequate to support the full use of state-of-the art web technology by faculty and students.

Annotated Bibliography

Background information on on-line learning

Report of the University of Illinois Teaching at an Internet Distance Seminar. December 1999.

Product of a yearlong study, this balanced report lays out strengths and weaknesses of on-line learning. Long (50 pages), but contains a hefty bibliography and is highly recommended. **This is the single most useful resource encountered by the committee.**

<http://www.vpaa.uillinois.edu/tid/report/>

"The Kept University." By Eyal Press and Jennifer Washburn. *Atlantic Monthly*. March 2000.

"Commercially sponsored research is putting at risk the paramount value of higher education--disinterested inquiry. Even more alarming, the authors argue, universities themselves are behaving more and more like for-profit companies." Last part of the article is titled "TheHigherLearning.com."

<http://www.theatlantic.com/issues/2000/03/press.htm>

"Shoptalk: Universities Graduating to dot-com profits." By Ken Yamada. RedHerring.com. March 15, 2000.

"The Internet may indeed be changing education, but not as first was imagined. Instead, the Web is emboldening universities to get into the dot-com act. They're starting new ventures, partnering with technology companies, developing online classes--and searching for profits. But providing quality education in concert with the Web's great ability to drum up students and generate new revenue will be tricky. Those who fail risk tarnishing hard-earned reputations, while the winners may become true 21st-century institutions."

<http://www.redherring.com/industries/2000/0315/ind-shoptalk031500.html>

"The Soul of a New University." By Arthur Levine. *New York Times*. March 13, 2000.

Op-ed piece by the President of Teachers College, Columbia University, warning that the future of higher education may be on-line. [no longer available on-line]

"Psych Students Learn More through Distance Ed but Are Less Satisfied." By Sarah Carr.

Chronicle of Higher Education. February 14, 2000.

Comparison of results of an introductory psychology course offered in Web-based and traditional formats.

<http://chronicle.com/free/2000/02/200001401u.htm>

"A Skeptic Assesses the Net as a Resource for Teaching." By Robert M. Aiken. *SIGCSE*

Bulletin 31 (1999): 79-82.

Keynote address by Temple University professor for ITiCSE International Conference in Krakow, Poland.

Intellectual Property

"Intellectual Property Meets Information Technology." By David Thompson. Chapter 6. Pp. 107-18.

Thompson's reflections after chairing a year-long series of meetings of a university-wide committee at Harvard. ". . . [R]ather than asking whether a Web-based course is more like a book, which generally a faculty member would own, or like an invention, to which an institution often retains right, the more appropriate question is whether the institution has contributed significantly to the making of the product. Beyond this assessment of ownership, Thompson urges that attention also focus on the important financial, intellectual, and reputational interests of the institution."

"Toward Shared Control of Distance Education." By Gail S. Chambers. *Chronicle of Higher Education*. November 19, 1999.

Argues that outright ownership of distance education courses by either faculty or institutions would propel higher education to become "still more commercial than it has already become." Faculty ownership would lead to "commercial marketing cooperative[s]" as a delivery system. Institutional ownership would result in a delivery system that would be the "education equivalent of a group of H.M.O.'s." Chambers argues for a model of shared ownership.

"Harvard weighs tighter rules on faculty's Internet ventures." By David Abel. *Boston Globe*. April 2000.

"Harvard's first universitywide effort to revise its conflict of interest policy since 1948."

Articles mentioning GEN and Williams

"College to consider private company's online courses offer." By Alix Davis. *Williams Record*. January 11, 2000.

Article describing GEN proposal and the charge of the Ad Hoc Technology Committee.

<http://record.williams.edu/article-asp?article=11810>

"Distance-Education Company Woos Bastions of the Liberal Arts." By Sarah Carr. *Chronicle of Higher Education*. February 14, 2000. Shorter on-line version, January 28, 2000.

Article on GEN and its interest in Williams and other colleges and universities. Associated Colloquy section has many comments and reactions by Williams alums.

<http://chronicle.com/free/v64/i21/21a04301.htm>

"Boola, Boola: E-Commerce Comes to the Quad." By Jacques Steinberg with Edward Wyatt. *New York Times*. February 13, 2000.

Overview of for-profit companies interested in getting involved in distance education. Williams mentioned briefly.

<http://www.nytimes.com/library/review/021300internet-professors-review.html>

Articles mentioning other institutions

Distance Education section of the *Chronicle of Higher Education* contains daily updates on issues. Some articles move quickly from the "free" to "subscribers-only" section.

<http://chronicle.com/distance/distance.htm>

"Three Universities May Jointly Offer Online Courses to Alumni." By Sarah Carr. *Chronicle of Higher Education*. March 17, 2000.

Article on Princeton, Yale, and Stanford collaboration.

<http://chronicle.com/free/v46/i28/28a04701.htm>

"UK launches e-university to sell degrees to the world." By Lucy Hodges. *Independent News*. February 12, 2000.

Plan sounds spectacular--but assumes Oxford, Cambridge, London universities will agree--they have not been consulted.

"A For-Profit Subsidiary will Market Cornell's Distance Programs." By Sarah Carr. *Chronicle of Higher Education*. March 14, 2000.

Cornell's plans for a for-profit subsidiary for distance learning, and their faculty's concerns.

<http://chronicle.com/free/2000/03/2000031401u.htm>

"Billionaire planning free cyber university." By Cindy Loose. *Berkshire Eagle*. March 15, 2000.

"High-tech billionaire Michael Saylor will announce tomorrow that he has donated \$100 million as a down payment toward creating an online university that he says will offer 'Ivy League-quality' education to anyone in the world--free."

"Online Learning: Ready or Not, Here It Comes." By James Robinson. *Stanford Report*.
February 9, 2000.

Report on a Stanford Faculty Senate meeting at which President Gerhard Casper said he fears that the faculty in general is not worrying enough about the rapid changes technology will bring to the classroom. Contains comments that suggest (incorrectly) that Williams has already signed on with GEN.

<http://www.stanford.edu/dept/news/report/news/february9/senate-29.html>