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Creating Academic Web Space For Faculty: Research And Teaching Initiatives At The University of Iowa Libraries

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CREATING ACADEMIC WEB SPACE FOR FACULTY:
RESEARCH AND TEACHING INITIATIVES AT THE
UNIVERSITY OF IOWA LIBRARIES

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The integration of networked information and new technologies into personal research and teaching is a risk for most faculty. It involves learning constantly changing software and hardware and requires dependence upon technologies and infrastructure beyond their ability to design or control. The fruits of the work required to incorporate new technologies into teaching and research in terms of professional rewards or increased learning may be uncertain at best.

Yet there is a growing interest on the part of faculty members, even those who may be quite new to the use of technology beyond the overhead projector, to master the basics of information creation on the World-Wide Web. Faculty in every discipline are now accustomed to finding information on the Web and many are feeling the urge to produce sites of their own creation.

Once a faculty member has taken the decision to risk this investment of time and intellect, learning how to use new technologies can be another struggle. The need for increased training opportunities is consistently mentioned by faculty on surveys as a high priority need.(1) Information technology centers and libraries that have the mission of actively promoting

the use of information technologies in faculty teaching and research face a fundamental challenge of how to create an environment that optimizes an individual faculty member's potential for success in a way that might scale up to an entire campus.

The University of Iowa has several programs that promote the successful adoption of information technology by faculty. It is unlikely that any of the current programs would have evolved were it not for the founding of the Information Arcade as a physical facility in the Main Library in *1992.* But although a robust technical infrastructure is certainly necessary it is not sufficient to unleash the creativity of faculty. The key component is human support. Our experiences at Iowa suggest some new roles for librarians that may prove useful for building campus partnerships with faculty as well as in supporting the development of innovative academic web spaces.

Bailiwick

The University of Iowa Libraries Information Arcade opened in 1992. It was established with a substantial grant from the Roy J. Carver Charitable Trust that equipped the facility with workstations able to accommodate the development of electronic resources, including multimedia, as well as a classroom with sophisticated presentation equipment.

The founders of the Arcade anticipated that easy access to high-end equipment would provide faculty innovators with the sufficient opportunity to "follow their bliss" in the creation of

new educational tools. For instance, one professor of English immediately used the facility to develop a database on the 1893 Columbia Exposition in Chicago for a course on "Literature and Culture of Twentieth Century America."

The experience of assisting with the construction of the hypertext tour of the Columbia Exposition was a threshold event for the Arcade staff. They soon realized that these new web-based resources are a species of electronic publishing. The resources are not necessarily closely tied to a particular course and they are not publications of the sort that typically contribute to tenure portfolios. But they are scholarly in nature and they require the facilities of a technology center complete with the assistance of technically savvy support staff for their development.

Certainly for a number of years, academic departments have been able to mount departmental information on the University's central web server that is maintained by academic computing. More recently, two centrally administered course web servers have been made available to any faculty member or teaching assistant offering a credit course. But based on feedback from faculty and graduate students, Arcade staff learned that there was no place for a research idea or other serious, academically-oriented projects to be published on the web. Faculty and students needed to bury these somewhere on a personal home page, often with a commercial Internet service provider and at their own expense. Thus we identified a campus-wide need for a reliable, institutionally supported web server for just this sort of

electronic publishing endeavor. The Arcade decided to provide a way for someone to define their "Bailiwick" and get assistance in the design of serious academic web-based tools.

Officially launched to the campus community in March of 1998, Bailiwick provides a space on the World Wide Web where academic passions can be realized as highly specialized and creative web sites. It is not simply a place for personal home pages, nor is it intended for course web sites or academic departmental information. It is not designed to serve as the new model for scholarly publishing in peer-reviewed journals. Rather, Bailiwick is designed to provide faculty, staff, and graduate students with web space where they can focus on a particular area of scholarly interest, where they can "follow their bliss" in digital form.

Most electronic publishing initiatives arise from an attempt to transfer existing models of print publishing to the digital environment. Bailiwick, instead, provides a web space that allows creators to harness and exploit this electronic medium, permitting new models of publishing with multimedia, hypertext, and the ability to incorporate anything in digital form. It is not intended to substitute or even compete with traditional scholarly or electronic publishing. It provides an opportunity to engage in an entirely new mode of scholarly communication.

An individual bailiwick might:

* serve as a home page for artistic expression and collaboration between artists working in Iowa and other countries

* be a showcase for digitally produced art that incorporates interactivity meant to be viewed on a computer screen

* provide a natural home for hypertext experiments that explore new forms of multilinear argument or open-system documents that welcome, even depend on, links to other web sites to expand or counter those arguments

* host a site not full of bells and whistles but simply a collection of narrowly focused pages of links to resources on a given topic

* offer an electronic publishing medium for delivery of specialized bibliographies or digital reproductions of rare documents

Open by simple proposal to faculty, staff, and graduate students, Bailiwick runs on a dedicated web server within the library and is supported by the University Libraries' web server infrastructure. Content providers retain editorial control and freedom, and have the ability to define their topic of interest, identify the target audience, and design a customized web site. Each Bailiwick is initially limited to 5 MB of space, with the ability to petition for more based on specific needs for a given project. In addition to the disk space, authors can tap into the staffing resources and expertise at the Information Arcade for

consultation on site design, graphics and layout, technical support, and training.

There are currently eleven Bailiwicks in production, with another eight more being developed. The authors of Bailiwicks represent thirteen different academic departments, including Communications Studies, Political Sciences, Athletics Administration, and Theatre Arts, and they range from teaching and research assistants to full professors.

Libraries staff have also claimed Bailiwicks. The idea that the Libraries should support innovation in the creation of substantive academic resources apart from course web-ages caught the imagination of librarians about the same time that The Libraries launched its Scholarly Digital Resources Center (SDRC). One of the units of the SDRC is the Center for Electronic Resources in African Studies (CERAS). The Bailiwick idea combined with the energy of CERAS and resulted in the development of a multi-faceted Bailiwick developed by Libraries staff that has focused on Africana.

The imaginative combination of electronic publishing, tool development, and an in-depth collection of specialized web sites has combined to produce a number of vital projects that are rapidly becoming a robust academic resource. Without the time spent by Arcade staff with faculty, one-on-one, innovation on this scale would have been much more difficult to accomplish.

Teaching with Innovative Style and Technology-

Innovation of another sort has been fostered in the "Teaching

With Innovative Style and Technology" (TWIST) project. Again supported through the generosity of the Roy J. Carver Charitable Trust, TWIST is a model program designed to train librarians and faculty in technology and assist those who wish to incorporate new technologies and information resources into their courses.

Librarians have long worked with faculty members in designing course-related instruction. But the association of the librarian with a course does not usually extend deeply into the design of the course. But when "word got out" that library staff were willing to work with faculty to develop course-related web pages, TWIST began to expand rapidly. Its first clientele were faculty who already had a strong relationship with librarians through traditional user education programs. These pairs were dubbed "TWISTed Pairs" in reference to the most common form of telecommunications wire. Then an instructional designer joined the librarian who is the Project Coordinator, TWIST got its own server, and the project started to grow into a larger team effort. And it began to catch the attention of faculty who had never before worked with a librarian in course related instruction.

In the TWIST model reference librarians continue to act as information resource specialists for course-related materials. However as the faculty member discusses the course web page with the Project Director, the Instructional Technologist, and the subject-area librarian, the librarian's role shifts. No longer on the periphery of the course, librarians and technologists discuss with the faculty member before the class begins what are the course goals, what electronic resources does the library have that

could be linked to the course pages, what print resources should be integrated into the course, where in the course should library-instruction best take place, and what are the information related skills the students need to acquire in order to fully participate in the newly built course, etc.

No longer is the librarian's participation in the course bounded by a lecture about using the online catalog or a tour of the library. Librarians now frequently participate in class listservs, answering questions about the use of materials as they arise during the flow of the course. The expertise of the TWIST staff is central to the success of the faculty member in building the entire educational experience. Librarians see themselves afresh as partners "from the ground up" in the support of the course.

The skills of an instructional designer have been used to expand the repertoire of TWIST support far beyond the design of resource pages in a course website. TWIST also assists the faculty with other options such as listservs, use of groupware, mounting sound/image/text files within the course website, and videoconferencing. Periodically a new "widget" is designed. For instance a method of compiling and displaying on a course web page anonymous "brainstorm" contributions submitted by class members at their workstations has been designed. One of the most commonly used tools is a web-based bulletin board that can be adapted for many different pedagogical uses. Using a message-posting form, students simply type in a message that is then automatically posted to a class web page for others to see. This bulletin board

has been used for a multitude of activities, from posting journal entries for critique by classmates to providing password protected discussion areas that are segmented to relate to different areas of the course.

The intensity of the TWIST collaboration is helping to energize and expand course-related instruction at the University of Iowa. And it is indeed transforming instruction at the University. Several faculty who have never before used instructional technology are now strong proponents of TWIST sites as being essential to their teaching. Evaluations heavily underscore the value of one-on-one technical support for faculty in English, some of which is a function of the current technical infrastructure of the university. It is also apparent that the faculty are far less aware of electronic resources available through the library than we had hoped. Having the librarians suggest links to electronic information resources for courses has been a great learning experience for the faculty as well as the students. As a critical mass emerges within the department, the pages are even becoming a recruitment tool that departmental administrators use when discussing what is the "profile" of the department with prospective students.

Student evaluations from TWIST courses reveal that most students would recommend to other students taking a course that utilizes TWIST technology, that the web site was aesthetically pleasing and easy to use. Students agree, although a bit less strongly, that use of the site or the technology enhanced their learning and that they used the links to online resources that

were integrated into the web pages. Mixed results are obtained from questions about whether the pages resulted in greater use of the library and whether they motivated participation in the course.

Next Steps

Throughout the program TWIST faculty have been encouraged to take over maintenance of their own course sites. The faculty have declared themselves interested in maintaining their own course sites, but the departmental infrastructure has rarely been robust enough to allow full independence. The question of how to continue to provide support for the level of personal interaction seemingly required to assist faculty to engage in experimentation remains.

Certainly some TWIST faculty could provide "train the trainer" support for departmental colleagues. But faculty who are able to consistently take time from their own research and teaching to assist colleagues are few and far-between. Web-based tutorials have been developed in the project for on topics such as creating web-based instructional pages, integrating various groupware and multimedia packages into instruction, and use of WebCT, the on-line course management software supported by the central computing staff. Tutorials might prove useful in the long run as a reminder to people who have gone through a training experience, but currently they seem to be less than useful for the majority of faculty who have not first had one-on-one or small group support. It remains to be seen whether tutorials work at all as self-paced instruction for those who have reached some (as yet

unknown) threshold of familiarity with instructional technology. Until we gain more experience with how faculty and staff use the tutorials it seems that personal instruction is required, at least initially, to support faculty learning of new technologies.

As the project expands library staff have faced the need to carefully select the level and type of work that librarians undertake on the faculty member's behalf. TWIST is planning an experiment with the English Department this semester to see whether we can devise a project model that will scale up to the departmental, if not the college, level. The proposal for support as it now stands includes using departmental research assistants as support for all faculty who need existing pages updated and revised.

Group training sessions will be held in the department solely for English faculty. The department chair will encourage attendance at these sessions and will schedule them during regular departmental meeting times. English faculty who have had the benefit of individual consultation for several prior courses will be expected to take advantage of group sessions at which assistance for coursepage design and creation will be available. Individual sessions will be scheduled only for faculty new to the TWIST project. TWIST project personnel will work with select departmental graduate and research assistants to train them in basic technical skills so they can provide office and house call support on demand to the faculty. The English department is also considering the purchase of their own server for TWIST pages that they will maintain with the assistance of a college-funded system

administrator.

Conclusion

As librarians expand their role on campus in promoting instructional technology, they must remember that the provision of physical resources is not sufficient to generate the enthusiastic adoption of new technologies. Certainly it is important that a wide range of software and hardware be available for faculty experimentation and that the campus have sufficient infrastructure for the use of sophisticated instructional packages once they are developed. But access to resources is not all that is required to kindle the emotional commitment and intellectual investment necessary for busy faculty to take the time to learn new skills.

Applying new technologies to research and teaching is an effort that requires substantial face-to-face interaction. Librarians must understand both the personal vision of the faculty member and the vulnerability she may feel when confronted with tasks outside her current expertise. Librarians now have new opportunities to demonstrate their ability to become partners with faculty on a level that over time will help to re-shape campus learning communities.

Notes

1. See for example: Winston Tellis, "Information Technology in a University: a Case Study," *Campus-Wide Information Systems* 14:3(1997): 78-91; Debora Shaw and Charles H. Davis, "The Modern Language Association: Electronic and Paper Surveys of Computer-Based Tool Use," *Journal of the American Society for Information Science* 48:9 (September 1997): 843-852; and Judith Adams and Sharon Bonk, "Electronic Information Technologies and Resources:

Use by University Faculty and Faculty Preferences for Related Library Services," *College & Research Libraries* 56:2(March 1995) 199-131.