

VIRTUAL RESOURCES AND INSTRUCTIONAL INITIATIVES: SNAPSHOTS OF LIBRARY EXPERIMENTS

ARL libraries are setting a rapid pace for experimentation as they replace or supplement traditional information literacy classes with a variety of library engagements in classrooms, through course management systems, and in the virtual spaces inhabited by students and faculty. Respondents to a survey conducted by ARL during the late winter and early spring of 2008 described a widely varied landscape of instruction initiatives.

The survey invited all ARL libraries to describe innovative and noteworthy experiments in three areas: instruction programs, virtual resource development, and space initiatives. Of the 123 member libraries, 77 participated in the survey, for a response rate of 63%. Responses to the first two elements of the survey (instruction and virtual resource development) are summarized in this article; responses to the third element, space initiatives, will be reported separately.

Innovations and noteworthy experiments were defined in the survey as either "a new service for the library," or "unique in academic librarianship." Respondents briefly described the initiative, provided supporting documents and URLs, and offered assessment data where it existed. What is new or innovative for one library may be a standard and long-practiced approach at another institution. Whatever one's perspective however, it is clear that considerable change is underway. Research library engagement in, and support for, student learning and academic success is producing an instruction landscape that is varied, evolving, and shaped by local cultures and opportunities.

Underlying many of the examples described by survey respondents is an agenda to develop students' information fluencies *beyond the needs of a single assignment or course*. Goals are shifting to produce individuals who are adept at critically evaluating resources within their discipline and across disciplines, who incrementally enhance their research skills over several years, and who develop capacities for critical self-reflection and ethical behavior. Adoption of this agenda has a direct bearing on library collaborations with teaching faculty, sharpening the focus on student learning outcomes. Increasingly, libraries rely on technology to create and deliver persistent aids, tutorials, and context-sensitive assistance in ways that emphasize active learning and support research-based curricula. As one respondent noted, "The pedagogy for these sessions has changed dramatically over the past several years. From "sage on the stage" instruction with time for hands-on experimentation, we have moved to self-paced online assignments with the instructor...acting as a resource person."

This summary of the initiatives described by survey respondents is organized around themes that emerged in the responses:

- Collaborations with academic faculty
- Digital images
- Podcasts/vodcasts
- Blogs
- Facebook
- Short Web tutorials
- Specially assigned librarians
- Immersion in special collections
- Mentoring/training of instruction librarians
- Plagiarism and ethics
- Customer-informed training, faculty workshops, student research competitions

Collaborations with Academic Faculty

A growing number of library literacy programs embed resources into course management systems like Blackboard and WebCT. The ambition of these comprehensive instruction programs is to instill increasingly more advanced information competencies from freshman to senior year. For example...

University of California, Berkeley's Undergraduate Student Learning Initiative (Mellon-funded) transforms undergraduate course curricula into research-based activities. Courses across a broad range of disciplines were redesigned to incorporate information competencies, research skills, and the use of the library's print and digital collections as integral components. Comprehensive evaluation of this ambitious program will likely emerge in 2009.

<http://www.lib.berkeley.edu/mellon/>

Librarians at **North Carolina State University** partner with Engineering and Textiles faculty on curriculum-integrated information instruction. Librarians coordinate resources that students need to complete assignments, and create a rubric for faculty to grade the assignments. "Partnerships with faculty are the essential component of any curriculum-integrated library instruction program, and developing a strategic plan for cultivating these relationships is crucial."

<http://www.lib.ncsu.edu/instructiontoolkit/>

For a required freshman writing course, **University of Minnesota** is dropping its overwhelmed workshop series in favor of digital modules, prepared in collaboration with the Writing Program staff. The digital learning materials will replace most face-to-face workshops. Four pilot modules were tested in spring 2008, created with Lectora, and initially accessed from the libraries' Web site. Additional modules will be integrated over time.

<http://www.lib.umn.edu/site/aboutunravel.phtml>

Digital Images

Digital image databases represent large library investments that are unevenly used. In order to ramp up use in academic classes and research, some libraries are creating staff positions and service units to engage faculty more deeply in the use and

management of licensed and personally owned images. For example...

Cornell University Library's Digital Image Instruction Assistant helps to "bridge content, services, and users." Faculty are shown how to exploit the potential of image delivery systems, increase the quality and availability of digital images, incorporate new strategies for teaching digitally, and make effective presentations. Use of digital images has surged. <http://imageinstruct.library.cornell.edu/>

The Imagebase component of ARTstor at **University of Miami Libraries** offers a growing collection of images to browse, embed into a course management system, and apply to research. The database is heavily marketed to faculty. A Digital Library Fellows program provides funds and technology to faculty for the creation of innovative electronic scholarly content that is open access. The program awards projects that will have a significant impact on teaching, learning, and research. <http://merrick.library.miami.edu/>

Podcasts/Vodcasts

Podcasts and vodcasts capitalize on the proliferation of iPods and mobile devices carried by students, and on students' practice of seeking quick bites of information. Instructional videos are sometimes adapted for downloading as podcasts. Producing podcasts and vodcasts is inexpensive, technically easy, and open to quick revisions and updates, giving libraries a Web 2.0 entrée for consumers. For example...

Ohio University supports podcast library tours in many languages: Swahili, Japanese, Mandarin Chinese, Spanish, Malay, Portuguese, and Arabic. Students can download content to their own iPods, supplemented by library iPods available for checkout.

http://www.library.ohiou.edu/podcasts/?page_id=14

The Library Channel developed by **Arizona State University Libraries** is a richly realized portal for podcasts, videos, and other library materials. It feeds an exceptional mix of content that features faculty presentations; library services, resources, and information literacy podcasts; campus news of the day; etc. New content is continually supplied, mixed, and presented to appeal to students. Content can be downloaded to MP3 players and other devices.

<http://lib.asu.edu/librarychannel/about/>

Blogs

In recent years, blogs have become a delivery mechanism for library publishing and information awareness. Blogs enable libraries to create an evolving Web site of resources and guidance, with options for the user community to comment on postings. For example...

New York University Libraries' blog service is designed to create community among students and faculty. The site is imbued with library content and detailed explanations of services and resources. Seminars, training sessions, digital exhibits, and

videos of library-sponsored programs proliferate. <http://liblink.wordpress.com/>

The **University at Buffalo Libraries'** "Services for Students" blog offers library hints, services, assignment tips, and resources pertaining to student learning and research. This content is replicated on the libraries' Facebook page. The libraries are planning opportunities for students to create content for the site, including reviewing books and media productions. <http://libweb.lib.buffalo.edu/blog/students/>

Facebook

Harnessing Facebook to portray library services, resources, and instructional materials is proliferating across libraries. The immensely popular virtual convening ground seems a logical destination for marketing and heightening awareness of libraries with packaging and language tailored to appeal to undergraduate students. For example...

The **University at Buffalo Libraries** duplicates its blog content (mentioned above) in Facebook. The libraries' page supplies links to a number of resources, along with an FAQ, chat service, alerts, links to digital library exhibits, and other items of student interest.

<http://www.facebook.com/pages/Buffalo—NY/University-at-Buffalo-Libraries/6629876727>

Pennsylvania State University Libraries created a Facebook application to provide access to the online catalog, ProQuest databases, live help, and other resources. The libraries are adding more extensive social and collaboration components to the application over time. <http://apps.facebook.com/psulibrary/>

Short Web Tutorials

Point-of-need tutorials are proliferating in ARL library instruction programs. The rise of video tutorials capitalizes on students' heavy consumption of digital videos. Camtasia is the most popular screen video capture program for creating instructional materials. The majority of context-sensitive tutorials are text-based, but soon may be surpassed by videos. For example...

Examples of Camtasia-created instructional materials for chemistry can be seen at:

MIT Libraries

<http://libraries.mit.edu/guides/courses/fall2007/3.091/>

McGill University Library

<http://www.mcgill.ca/schulich/collections/links/course/chem120/#VIDEOS>

The **University of Illinois at Urbana-Champaign** has created short video tutorials covering basic tools, research processes, and databases, presented as a mix of video and print descriptions. Video tutorials are also posted to the libraries' YouTube site. The collection of self-paced video tutorials is complemented by Web-based guides, including one particularly rich compilation for undergraduate students:

<http://www.library.uiuc.edu/ugl/howdoi/how.html#research>

A portal for all instructional resources is available at:
<http://www.library.uiuc.edu/learn/>

Research 101 is a **University of Florida Libraries** and Center for Instructional Technology and Training project to create interactive, Web-based information literacy tutorials for undergraduate and distance-learning students. Five tutorials introduce basic library research skills, finding information, learning search techniques, and strategies for evaluating sources. The tutorials include flash-based activities that allow students to interact with the content, and take quizzes to test comprehension. Research 101 is also embedded within WebCT Vista.

http://mihq.org/smathers/research101_intro.html

Specially Assigned Librarians

Libraries are imagining new ways to identify with the populations they serve. The resulting new roles for librarians include special assistance to discrete populations of students. For example...

Cohort classes at the **University of Chicago** are assigned a "class librarian" to work with them until graduation. The class librarian maintains Web pages with class-specific information and timed e-mails to reduce freshman anxiety, prepare for upcoming deliverables, and condition upperclassmen to rely on the library when beginning research papers and senior theses.

At **Johns Hopkins University Libraries**, a consultant to undergraduate research journal editors provides assistance with writing style, scholarly resources, and article editing. This assistance is well received and elevates the libraries in the eyes of influential student editors.

Immersion in Special Collections

Special collections are a defining characteristic of each ARL library, and primary source materials are being promoted to undergraduates in new ways. Providing primary materials to foster genuine student research elicits enthusiasm from students and faculty. For example...

At the **University of North Carolina Libraries**, collections of audiotapes, diaries, photographs, and other primary documents have been digitized and woven into a rich collection of resources (Stories of the American South, an educational resource that is part of Documenting the American South) for class work. A faculty client reports, "these efforts help our undergraduates to gain an understanding and appreciation for the power of primary source material in the study of history." Assessment indicates that undergraduates exposed to the digital series Stories of the American South were more apt to find and use primary source materials in future assignments.

<http://www.lib.unc.edu/stories/>

Georgetown University, through its Carroll Fellows Initiative, offers freshmen an option to work with special collections materials. Undergraduates are paired with

graduate student "mentors" to transcribe, research, and edit un-researched 19th-century letters. This "manageable discovery research experience" popularizes special collections that are typically underutilized by undergraduates while also imparting research methodologies and subject expertise. Librarians and faculty collaborate on seminar content and learning outcomes.

<http://gervaseprograms.georgetown.edu/carroll/>

Mentoring/Training of Instruction Librarians

As pedagogy and instruction methods change, so, too, must the preparation for librarians. Several libraries have responded by providing intensive workshops and special training series for library instructors. For example...

At **Cornell University**, the library instruction program collaborates with the Center for Learning and Teaching (CLT) to produce a "train the trainer" videotape series. The librarian instruction sessions focus on instruction modules, critically observing teaching, and providing effective feedback. The libraries and CLT have evaluation forms and other material to facilitate the process and assess efficacy.

<http://www.cte.cornell.edu/campus/teach/faculty/faculty.html>

The **University of Texas Libraries** help instruction librarians with a comprehensive tutorial covering "Tips and Techniques for Library Instruction." A workshop on teaching styles includes a mockumentary portraying poor teaching and resulting student reactions. Staff benefit from workshops on emerging Web 2.0 technologies as they apply to finding, organizing, and synthesizing information when planning instruction modules. Tutorial:

<http://www.lib.utexas.edu/services/instruction/tips/>

Plagiarism and Ethics

Copyright in the digital age has refocused attention on ethics, especially the responsible use of others' intellectual output. Libraries invariably are partners in campus-wide initiatives to raise student awareness and influence behavior. For example...

The **University of Maryland Libraries** have launched an Academic Integrity Initiative in collaboration with other campus partners to raise awareness, and to provide information to students and educators on how to use research resources in a responsible and ethical manner.

<http://www.lib.umd.edu/UES/integrity.html>

The **University of Texas Libraries** have developed a plagiarism prevention program for freshman learning communities in collaboration with other campus units. The program is delivered by upper-division undergraduate mentors assigned to each community. The mentor is trained to take the group through an exploration of why, how, and when to cite sources, assisted by active learning exercises such as a "cite it" game and "you be the judge" small-group discussions. Curriculum coordinators believe that "peer-to-peer

learning is a very effective method for [engaging freshmen in] this type of content.”

<http://www.lib.utexas.edu/services/instruction/faculty/plagiarism/>

Customer-Informed Training, Faculty Workshops, Student Research Competitions

The instruction programs of some libraries are strongly influenced by client requests for specific classes and training. Some libraries have created special faculty training opportunities in collaboration with other campus units. These may feature new teaching technologies, examples of library partnerships in courses and across disciplines, and helpful information-use tools. In other cases, competitions have been created to identify exemplary examples of undergraduate research. For example...

University of Pennsylvania Libraries offer a rich mix of short classes and training opportunities in the Weigle Commons of Van Pelt Library, from multimedia topics to advanced information-searching skills to making effective conference presentations. Penn faculty and students suggest courses as well as volunteer to teach them. Most instruction is provided by library staff, or by campus collaborators. Assessment is ongoing.

<http://wic.library.upenn.edu/workshops/>

University of Michigan offers an Enriching Scholarship workshop each May for faculty as a collaborative venture of the libraries and other campus groups to promote applications of technology with new forms of pedagogy. One quarter of the training sessions offered in 2007 were conducted by library staff.

<http://www.umich.edu/~teacht/ec/es.html>

The **University of California, Berkeley** “Library Prize for Undergraduate Research,” established in 2004, recognizes excellence in undergraduate research projects that draw upon university library collections and “demonstrate use of sophisticated information literacy and research skills.” Judges focus on the research process portrayed in each student submission. “Many essays include revealing statements about personal setbacks and challenges, false starts, muddled thinking, desperate measure, and despair—all shared student experiences.”

<http://www.lib.berkeley.edu/researchprize/>

In Summary

The examples cited above were selected to give the reader a sense of the rich experimentation underway with instruction programs, outreach initiatives, and context-appropriate resources. They represent a small portion of all of the responses to the survey. All survey responses are available on the ARL Web site (see insert for details).

In reporting their achievements, ARL libraries frequently refer to the initiatives of sister institutions as providing critical impetus for moving in a new direction. There is a curiosity to know how others are creating opportunities to engage their client populations. Some of the initiatives take advantage of unique campus

circumstances, but they nevertheless can inform and encourage variations on the theme in other libraries.

Libraries clearly recognize the importance of embedding information tools, resources, and expertise into the teaching, learning, and research enterprises. They are following their user populations into the virtual spaces they inhabit (course management systems, Facebook, YouTube), and infusing portals with content, news, and even examples of students’ creative output that are intended to draw the student back for repeated visits.

It also appears that the rapid pace of experimentation and redesign of information literacy engagements will be sustained into the future. One detects the gradual drying up of “cattle call” instruction sessions in library classrooms in favor of working with academic faculty and programs in more ambitious information-fluency enterprises. In the process of experimentation, libraries and the institutions they support will benefit from sustained assessment that reveals the impact of these efforts and suggests improvements.

For most of the initiatives being reported, there are lingering or unresolved questions:

- How do we know that we are genuinely influencing the academic performance of students?
- Are the goals and aspirations that drive instruction and virtual resource initiatives reflective of or linked to the broader mission of the university?
- Are we considering all opportunities to expose students to primary materials in archives and special collections?
- Are instruction librarians getting the support and encouragement they require to make inroads into academic programs, new course creation, and virtual-resource planning?
- Are these experiments scalable and adaptable to other institutions and settings?
- How could assessment strategies be applied to provide deep insight into these efforts?

In the meantime, we can expect to see new experiments with information instruction and virtual resource development. Library collaborations with academic faculty and departments will evolve, libraries’ presence in virtual spaces will accelerate, and assessment will play a larger role to reveal the efficacy of these efforts.

COMPREHENSIVE SURVEY RESULTS

In early 2008, all ARL libraries were invited to describe innovative and noteworthy experiments in instruction programs and virtual resource development.

Responses are summarized in the accompanying article and, in order to encourage wide sharing of experiences, all survey responses are available on the ARL Web site. See <http://www.arl.org/rtl/roles/>.