Chapter 5

Strategies for the Library: CMS Integration Barriers

In spite of the technical and cultural barriers to the integration of libraries and CMS, there is a growing list of success stories. Some are the result of campus initiatives; others are the outcome of grant-funded projects. A surprising number are the products of one or two individuals who chose to work toward solutions in spite of the barriers.

The strategies shared here have very different, specific goals, but they all contribute in some way to actualizing an online-learning environment in which the "library no longer will live outside the CMS. Instead, the CMS will serve as a door to the library" (Pyatt and Snavely 2004).

One helpful categorization of these strategies, suggested by Shank and Dewald (2003), is macro-level versus micro-level library integration into courseware. The macro-level strategies focus on inserting a library presence into the CMS at a very generic level. The micro-level strategies, on the other hand, provide library resources and services at very customized levels, tailored specifically for each unique course.

Each category of strategies has its pros and cons, which will be discussed. In many cases, a blended approach, with a mix of micro- and macro-level strategies, will prove the most effective.

Macro-Level Strategies

At the most simplistic level, the systematic insertion of a link to the library's Web site or catalog can establish a library presence within a CMS. The majority of courseware systems have a main menu of icons or tabs that greets the student upon login to the course site. Courseware system administrators can establish default items in the main menu across all courses, such as "Help" and "Announcements." Although a small, first step in building connections between campus courseware and the library, establishing a link to the library's Web site or catalog as one of the default, main menu items is certainly a positive.

A slightly larger step is to bypass this link the library's homepage and link directly to the library's subject guide or pathfinder that best supports the course curriculum. Such a project can be accomplished with very little work on behalf of both the library staff and courseware administrators.

Academic libraries commonly create subject guides for each of the disciplines in the university's curriculum. By mapping the subject guides to the courses offered through the courseware at a departmental level (such as anthropology subject guide to all ANT courses; biology subject guides to all BIO courses), each course can benefit from a link to a library resources guide appropriate to the broad discipline of the course. If official course codes include a departmental prefix, such as BIO for biology, then the insertion of the links can be automated via some "if . . . then" scripts.

Similar systematic links can be created if the library has refined lists of resources (such as journals and databases) at a discipline level. Again, this mapping can be done using nothing more than a course's departmental code.

Access to online reference is another macro-level strategy that ensures a communication link to the library is present within all course sites. If the library already is hosting an online reference or chat reference service, an access link can be imported into the CMS. Thus, a reference librarian is no more than a click away.

At the University of Illinois, Chicago (UIC), the librarians initiated the LINKS Program with the goal "to provide immediate access from each class's Blackboard

site to the library's email- and chat-reference service" (Collard and Georgas 2004).

The UIC Daley Library uses OCLC's QuestionPoint for its digital reference system. Through collaboration between OCLC and UIC, a digital reference submission form was created that mimicked the Blackboard interface, which "allows users to interact with [the UIC] digital reference service without appearing to leave the Blackboard environment" (ibid).

QuestionPoint Cooperative Virtual Reference
www.questionpoint.org/about

UIC Ask-A-Librarian Service
www.uic.edu/depts/lib/digital/bb/chat_libref.html

RefWorks
www.refworks.com

RefWorks Bridge Extension for Blackboard
http://bb-opensource.org/download/refWorks_Bridge_Extension_1_0.htm

OCLC and Blackboard are working to create a Blackboard Building Block that would create a true, rather than mock, integration of QuestionPoint and Blackboard. This would include the ability to pass pertinent information to the librarian responding to the question, such as the course site from which the question originated and the faculty member that teaches the course:

> Many course-management systems have chat tools already integrated into the system. If a library is considering the start-up of an online reference service, it might be possible to use the CMS chat tool instead of purchasing a stand-along chat product (Shank and Dewald 2003).

Another macro-level approach is providing access to bibliographic tools through the CMS, such as RefWorks. RefWorks is an online tool to create personal databases of citations and references that users can turn into bibliographies and works cited.

A joint project between Northwestern University and RefWorks led to the creation of a Blackboard extension that connects to RefWorks:

> Access to RefWorks is provided in two ways: Blackboard users can access their personal RefWorks accounts from within the course Tools page; instructors can set up links to specific RefWorks databases from within courses, allowing students to access course-specific reading lists and group research projects (from Web site).

Similarly, the library may offer plagiarism tools through the CMS. Turnitin, a plagiarism detection system, has a BlackBoard Building Block that can check all papers for evidence of plagiarism automatically as students deposit them into a course site's dropbox. Turnitin also has a plug-in that is compatible for WebCT, although the integration is not as seamless.

Turnitin
www.turnitin.com/static/products_services/bb_webct.html

Camtasia Studio
www.techsmith.com/products/studio/default.asp

Librarians can also use the CMS as a vehicle for library and information literacy instruction. For example, Babson College created video clips using Camtasia Studio software to teach remote users how to use library databases, which were inserted into the Blackboard sites of the appropriate courses (Drew 2003).

At Penn State College of Medicine, the library constructed tutorials on how to use PubMed and OVID Medline, which they placed in the ANGEL course-management system. "Feedback from the students using ANGEL for this purpose was very positive; the students requested that similar tutorials be developed for using other library resources as well" (Lovette 2004, 8).

At Oakland University, librarians created an entire WebCT module to teach students about the physical library building and services, how to use the online catalog, and searching using OCLC FirstSearch (Kraemer 2003).

One of the benefits of using a CMS to provide information literacy and library instruction is the placement of the instruction within the highly relevant context of the course itself. Moreover, such instruction can be integrated into the course even when faculty members are unable to devote in-class time to bibliographic instruction sessions.

Pros and Cons of Macro-Level Strategy

The benefits of the macro-level approach are specific to efficiencies of time and labor. A CMS administrator, without any work on the part of the librarians or faculty, can include library links at a global level in a CMS. This is particularly important when the ratio of librarians to courses is quite low, such as one would expect to find at a large state institution.

Moreover, a global strategy ensures a high level of uniformity. As a result, students can come to rely and expect the presence of a particular library link or bibliographic tool in the same location across all of their courses. Furthermore, the macro-level approach does not require the library staff to gain access to any specific course site.

Unfortunately, the macro-level approach is not without significant drawbacks. Shank and Dewald (2003) cite the lack of direct human contact with a librarian as one of the largest shortcomings. The mere generic presence of library resources within the CMS does not foster familiarity and supportive relationships with the individual librarians.

In addition, as discussed in the first chapter, the digital world has created an expectation of customization and personalization that increases with each new class of students. When it comes to library resources, students naturally expect more than a mere link to the library Web site. They are expecting librarians to push course-appropriate library resources to them through the CMS in much the same way that Amazon.com pushes book recommendations.

A student that has logged into her course's site is now working within the context of her course. She expects everything she finds within the CMS to work also within that same course-level context. A generic library presence is an unexpected mismatch of expectations. With that said, however, a limited library presence is far better than none.

Micro-Level Strategies

The first step for any micro-level strategy is to ensure librarians have the appropriate and adequate permissions within the CMS. Most CMS have varying levels of access the professor can opt to distribute accordingly. For instance, Blackboard has four main user roles:

- Instructor—Has full control over the creation and editing of content, and is a role normally assumed by the course's professor/instructor.
- Teaching Assistant—Has almost the same level of access as does the "instructor," with the exception that he/she cannot add "instructors" or additional "teaching assistants" to the course.
- Grader—Only has access to the Gradebook and Assessment areas.
- Course Builder—Has access limited to just the content areas.

Blackboard's course builder role appears most appropriate for librarians, as it provides them with the ability to add content, such as links to library resources and e-reserve materials. Furthermore, a course builder cannot see grades or the student and faculty discussion lists, which could constitute an invasion of students' privacy. See Giles (2004) for an example of how a librarian successfully used the Blackboard course builder access to become a positive member of the course.

One way to obtain CMS permissions is for the respective librarian to elicit each faculty member. While a very personable approach, it can become so time consuming and labor intensive as to negate the value of the service.

A global decree granting librarians access to all course sites at the university or campus level may be very difficult to obtain and fraught with campus politics. Academic schools and departments often have a level of autonomy that makes institution-wide mandates almost impossible.

The approach taken at Babson College was for librarians to request inclusion in the Blackboard courses on an academic department-by-department basis (Drew 2003). Permissions were limited to the review of syllabi and course assignments. The librarians could add resource links only with the faculty member's permission. The department-level approach appears to be a good balance between acknowledging departmental authority and efficiencies of process.

Importing Course-Specific Library Resources

As discussed above, significant obstacles to the customization of library resources within course-management systems are the lack of persistent URLs and multiple authentications. It's important to "create convenient ways to select and integrate resources [because] it is unlikely that faculty members will expend the time to figure out how to do it by themselves" (Rieger et al. 2004, 205). In other words, instructors need easy to use tools in order to pull library resources into the CMS, indiscriminate of the type or location of the content.

It's just as important for librarians to have ways to push library resources into the CMS, such as assignment-appropriate databases and reserve materials. Regardless if the materials are to be pushed by the librarian or pulled by the instructor, tools to overcome the obstacles of persistent URLs and multiple authentications are necessary.

One such tool is LinkMaker. LinkMaker is open source software created by Don Gourley of the Washington Research Library Consortium and Kathy Kilduff of Blackboard. This software integrates directly into the Blackboard system to provide a tool to facilitate the creation of persistent links to database articles:

> The LinkMaker extension works by transforming the addresses (URLs) of online documents into a "durable" form . . . not dependent on the current

> authentication or session of the person who is adding the links to the course pages. For some resources, this means redirecting the student through the library portal or proxy server, while other links may just need to have a session identifier stripped out of the address (from Web site).

LinkMaker only works with databases that already support the creation of persistent URLs. However, the advantage of LinkMaker is it provides a simple URL-creating process consistent across all of the databases.

LinkMaker
http://bb-opensource.org/download/linkmaker.html

American University LinkMaker
www.american.edu/cte/faculty/teachingbb.html#linkmaker]

JISC
www.jisc.ac.uk/index.cfm?name=home

JISC DiVLE
www.jisc.ac.uk/index.cfm?name=programme_divle

DEVIL
http://srv1.mvm.ed.ac.uk/devilweb

American University, which has been involved in the LinkMaker project actively, retains a list of databases it has thus far found to work with the software. Visual help files are included for each database, which provide a good understanding of how LinkMaker integrates with Blackboard.

Tools to facilitate the creation of resource lists were a major focus of several of the projects funded as part of the JISC DiVLE program. JISC is the Joint Information Systems Committee, which is supported by the further and higher education funding councils of the UK. Since 1993, JISC has been promoting and funding projects that explore the use of information and communication technologies within higher education.

When discussing the JISC programs and projects, it's useful to know that course-management systems in the United Kingdom are more often referred to as virtual-learning environments (VLEs). In addition, one can identify the JISC projects easily by their creative use of acronyms for project titles.

In the case of the DiVLE program, the quasi-acronym stands for "Linking Digital Libraries with VLE." The aim of the DiVLE program was to "explore the technical, pedagogical, and organizational issues of linking digital library systems and VLEs" (from Web site). This was accomplished through the funding of nine projects during the period of October 2002 to September 2003.

One such DiVLE project was DEVIL (Dynamically Enhancing VLE Information from the Library), undertaken by the University of Edinburgh and The Open University. The project's goal was to create "tools that can be embedded within VLEs to search repositories and create resource lists" (Blake et al. 2003, 3).

The resulting DEVIL tools could be embedded in WebCT, the homegrown University of Edinburgh courseware, and Open University's ProMISES eDesktop courseware. From within the courseware systems, instructors can search the library online catalogs and exam databases to create resource lists, and then mount those resource lists within the CMS.

A significant limitation of the DEVIL tools is the small body of resources it searches, which was revealed in the project's general findings:

> Most participants stated that they do not normally include books in the reading lists that they give to their students, but references to papers [articles]. For them to make proper use of the system it would be necessary to have access to periodicals and if possible to individual papers. They also said that it should be possible to edit/add external resources to the list prepared by the DEVIL system because they normally include many different types of resources in the reading lists (Blake et al. 2003, 17).

The Universities of Leeds and Oxford undertook the PORTOLE (Providing Online Resources to Online Learning Environments) Project as part of the DiVLE program. The intent was to create a "range of tools for tutors [instructors] which could be used to enable them to discover information resources and to embed these into their course modules within a University Virtual Learning Environment" (Stanley et al. 2004). Both Leeds and Oxford use the Bodington CMS.

PORTOLE
www.leeds.ac.uk/portole

Bodington
https://bodington.org

Using JAFER, a Java-based toolkit for building Z39.50 servers and clients, PORTOLE creates a search interface within Bodington that can search across the library online catalogs of Leeds and Oxford, Google, and the JISC Resource Discovery Network simultaneously. The instructor can select resources from the de-dupped list of

results and add annotations as appropriate. The resource list is then saved and presented to students from within Bodington.

As with the DEVIL Project, a significant drawback of the PORTOLE tool is the considerable limitation on the content providers it can search. "PORTOLE will only be of true value to users if we are able to expand the system to incorporate additional search targets. Particularly, users have flagged the need for the inclusion of journal articles. Potential exists to take these requirements forward; however, additional thought would need to be given to the information architecture of the system" (Stanley et al. 2004, ibid).

JISC Resource Discovery Network
www.rdn.ac.uk

OLIVE
wwwedit.wmin.ac.uk/olive

OpenURL
http://library.caltech.edu/openurl

MetaLib
www.exlibrisgroup.com/metalib.htm

SFX
www.exlibrisgroup.com/sfx.htm

Blackboard Building Blocks catalog
www.blackboard.com/dev/BBCatalog.htm

The OLIVE (Open Linking Implementation in a Virtual Learning Environment) project, also a part of the DiVLE program, focused on how OpenURL standards could be used to integrate library resources into courseware. The project was a collaboration of the University of Westminster and Royal Holloway, University of London.

The first OLIVE tool combines the functionality of ExLibris' MetaLib (metasearch tool) and SFX (OpenURL resolver) with Blackboard. Using the e-shelf feature of MetaLib, instructors can search for resources across OpenURL-enabled resources, such as some library catalogs, article databases, electronic journals, and digital repositories. References retrieved from the searches are then combined into a resource list, which can be annotated.

When students access the resource list from within Blackboard and select an item, the SFX OpenURL resolver redirects the students to the resource, such as a full-text article.[1] This tool is available to other Blackboard 6 users as the MetaLib-Blackboard Building Block.

The breadth of the MetaLib-Blackboard tool is limited to the number and availability of library content providers compatible with MetaLib, which in turn is limited those databases using the OpenURL standard, as well as a standard retrieval protocol, such as Z39.50 and XML gateways. Consequently, the resource lists have an artificially imposed restriction with no bearing on the appropriateness of the resources for the course's curriculum.

Purdue University Libraries, in collaboration with Purdue's Information Technology division, WebCT, and Endeavor, currently are working on a similar project that would result in the integration of Endeavor's ENCompass metasearch tool with WebCT. The goals of the project include: "a) embed federated searches for both collections and individual objects directly into the courseware; b) create tools for course instructors and/or library staff to identify resources for embedded searches; and c) pass the login authentication from WebCT to ENCompass" (Geahigan and Whitten 2004).

A second focus of the OLIVE project is an examination of how learning objects could be "referenced and discovered from within a VLE" using the OpenURL standard (OLIVE Project 2004, 15). Through the creation of another Blackboard Building Block, additional course metadata was added so the SFX resolver could identify copies of a particular learning object, as well as related resources, such as other learning objects by the same author or instructor. In addition, the project team built a custom search engine for learning objects that could search across learning object repositories including MERLOT and MIT's OpenCourseWare.

The OLIVE project reported one of the difficulties of this project was finding learning object repositories that used the IEEE Learning Object Metadata standard, and therefore could be search with the OLIVE tool (OLIVE Project 2004).

MERLOT
www.merlot.org

MIT OpenCourseWare
http://ocw.mit.edu

Even when online library resources have links that are not time-dependent, the links themselves may still change over time. Once the instructor imports the links into the CMS, they are beyond the reach of the librarians. So, while it's the library staff that are usually first to know about a URL change, they cannot assist the faculty in identifying and changing the broken links easily.

British Columbia Open University addresses this problem using a tool called the Virtual Library Collection (VLC). "VLC's primary purpose is to create a metadata record that sits between a source file (such as a Web page)

and the user looking for that information."[2] Resource links are maintained within the VLC registry, outside of the WebCT CMS.

When a student selects a resource, she is passed to the VLC, which then redirects her to the current location of the resource. "We want students to access resources in context, at the point of need. The VLC allows us to do this from within WebCT."[3]

The VLC concept was inspired by Athabasca University's Digital Reading Room, which is highlighted in chapter 6.

Vendor solutions are also available that can act as middleware between the CMS and library resources. For example, the University of Ulster has used Talis List, a commercial Web-based resource-management system, to provide tailored course resource guides through their courseware, WebCT.

The integration of WebCT and Talis List was funded by JISC under the auspices of the 4i Project (Interoperability, Institutional, Integrated, Implementation). The objective of the 4i project was "to assess the impact of an institution wide VLE-Library system integration on library business processes and the user experience" (from Web site).

The Talis List tool supports the searching, selecting, annotating, and organizing of resources via a Web-based editing tool. At the University of Ulster, faculty members in consultation with librarians identify appropriate library resources for each course. When a student selects a licensed library resource from his course's Talis List, authentication is passed from WebCT to the library resource using the Athens Access Management system, a commercial authentication system popular in the United Kingdom.

One result of this WebCT, Talis List, and Athens connection is students "benefit from seamless access to a variety of customized Library services and resources they would previously have had to use their own search and navigation skills to locate, and individual authentication credentials to access" (Uhomoibji et al. 2003, 330). Moreover, those online library resources that are Athens-protected have seen increased usage. For example, *ScienceDirect*, saw a three-fold increase is usage in a single year (ibid, 333).

Electronic Reserves

While a subset of the library course resources described previously, electronic reserves (e-reserves) have some unique characteristics. On most academic campuses, course reserves, whether in physical or digital form, historically have been a service provided by the library. This library service includes digitization and copyright clearance, in addition to the collocation and posting of materials. Many academic libraries have staff and specialized equipment and software devoted entirely to their reserve services.

Talis
www.talis.com

4i Project
www.ulst.ac.uk/library/4i

Talis List Datasheet
www.talis.com/downloads/datasheet_talislist.pdf

Athens Access Management
www.athens.ac.uk

Docutek ERes
www.docutek.com/products/eres

Moreover, there is little flexibility when it comes to reserve lists. Instructors select materials appropriate to the curriculum, not based on online availability and persistent URLs.

A 2004 ECAR study examined the CMS features that students most commonly use. At the top of the list was the CMS syllabus feature, used by 95 percent, which was followed very closely by online readings, used by just fewer than 95 percent. In addition, online readings ranked third in the list of "features that students perceive improve their learning." The heavy use of online readings, coupled with high levels (just more than 76 percent) of positive CMS experiences (Kvavik, Caruso, and Mason 2004), indicate there is a natural fit for electronic reserves within course-management systems.

Faculty members, as well as students, desire the inclusion of e-reserves into their course sites. A survey of Cornell faculty found that e-reserves were the top choice for library information to include in CMS by 42 percent (Rieger et al. 2004).

The integration of electronic reserves into a CMS does not necessitate the abandonment of current electronic reserves system, such as Docutek ERes. The College of Holy Cross, as an example, successfully was able to get their ERes and Blackboard systems to work together (Porcaro and Cravedi 2003).

At Holy Cross, students are authenticated within Blackboard and can then obtain their course reserves materials from ERes without the need for a second authentication. Another nice feature of the Holy Cross implementation is the retention of the ERes click-through copyright compliance statement, which is mandatory before the system grants access to any reserve materials.

Another example is Pennsylvania State University, which was able to integrate its pre-existing reserves module in the SIRSI Unicorn library catalog with their ANGEL course-management system. The project was a collaboration of Libraries and Information Technology

Services, which led to a modification of ANGEL to include a new Reserve Readings tool.

Prior to its introduction, students had to "go to the library Web site, enter the online catalog, sign on to the system (authenticate) and search for their course by course number or instructor name. This presents multiple opportunities for failure and could result in the inability to locate reserve materials" (Snavely and Smith 2003, 2).

Now, once the instructor activates the Reserve Readings link within ANGEL, a current and comprehensive list of reserve readings is just a single click away. When a student clicks on the link, the ANGEL system sends information to SIRSI, which SIRSI uses to construct a query for all reserve materials for that class. SIRSI sends the results back to ANGEL and displays in a Windows frame within ANGEL.

SIRSI Unicorn
www.sirsi.com/Sirsiproducts/unicorn.html

Northwestern University provides yet another example of how e-reserves can be coupled with a CMS (Cubbage 2003). When Northwestern University's Academic Technologies division began offering Blackboard in 1999, many faculty asked the Library's Reserve Department for links to their e-reserve documents, which were within the library's online catalog system, Endeavor's Voyager.

In response, the Reserve Department began offering faculty the option of continuing to post e-reserve documents in Voyager or within the faculty's Blackboard course. The library particularly encourages faculty to use Blackboard when the publisher's copyright clearance policy dictates password protection on electronically delivered documents, which the Voyager catalog is unable to do.

Unfortunately, since the Reserve Department at Northwestern does not have administrative access to Blackboard, they can only e-mail the e-reserves URLs to the respective faculty member, who in turn, must place the links within his Blackboard course.

Academic libraries that do not yet have an electronic reserves system in place might opt to use a course-management system as the tool to support an e-reserves service. For example, in 1998 a committee within the University Libraries of Notre Dame was charged with evaluating available systems to support an e-reserves service. After extensive research, the committee recommended use of the University's WebCT software, instead of purchasing a course reserves-specific system (Bales et. al. 2001).

The libraries have found WebCT to be a successful e-reserves tool for a number of reasons. Since access to the WebCT courses and the materials within are controlled at a student level, copyright guidelines for e-reserves are more strictly adhered to. Moreover, utilizing software already in use by the students and faculty eliminated the need to add yet another new electronic service, corresponding learning curve, and login and password.

The University Libraries of Notre Dame opted to create a separate, unique WebCT course to house the electronic readings for each course. In other words, e-reserves are not integrated into the professor's pre-existing WebCT course. Students, however, can see all of the WebCT courses available to them, whether created by faculty or the libraries, from a single MyWebCT page. An Information and Demo Course is available for viewing at http://ereserves.nd.edu.

The advantages to creating a separate WebCT course for library e-reserves include eliminating the need to obtain CMS access permission from faculty in order to add materials to WebCT courses. In addition, the independence of the Library's electronic reserves WebCT courses ensures a uniformity of design, which is controlled by a template, designed specifically for reserve materials.

Notre Dame conducted a student survey following their pilot project of the WebCT e-reserves system. Of the 454 students who responded to the survey, ninety-five percent thought the libraries should expand the e-reserves system to courses beyond the pilot project, which it has (Bales et al. 2001).

Library-Created Subject and Course Guides

Another micro-level strategy is to include library-created guides tailored to the specific courses in the CMS. This approach supplies students with ready access to library resources to consult when working on research papers and other class assignments.

Pennsylvania State University is working toward the goal of including a subject or specific course guide into every course site in their course-management system, ANGEL. The project's goal was to:

> create guides to library resources (appropriate databases, print and online reference resources, and Web sites) that pertain to a particular course and/or department and make them automatically available to the students *through* the course via the Course Management Software (Snavely and Smith 2003, 1).

To accomplish this, ANGEL was modified to create a special class of ANGEL users specifically for librarians. With this level of access, librarians are able to create and link library resources guides within any ANGEL course.

PSU librarians have the option of either using a template to create the guide, which requires no knowledge of HTML, or linking to an existing guide on the library's

Web site. Once created, a guide can be linked to all of the courses in an entire department or on a course-by-course basis. These guides carry over from semester to semester so that no additional work is needed for a repeated class.

With a template, databases can be added to the guide easily by selecting it from an alphabetical list and then prioritizing so the best databases for the course are listed first. Of particular note is the fact "the system automatically creates a link to the URL for that database through the proxy server so the student will be authenticated and can enter directly" (Snavely and Smith 2003, 3).

In additional to databases, the template facilitates the addition of journals, Web sites, research tips, and links to specific records within the online catalog. The ordering and naming of the resource headings is customizable to facilitate the addition of specialized content, such as maps and data sets. Library consultation is encouraged by including the subject librarian's contact information, as well as a link to the PSU virtual reference service.

Another example of is an outcome of the JISC-funded DELIVER project by De Montford University and the London School of Economics. The project developed a library template for WebCT. The goal was to build a template that was fully customizable by instructors and course specific in its content (Secker and Harris 2003).

Using a series of recommended icons, the DELIVER template points to various services and resources of the library from within WebCT. In addition to generic links to the library's homepage and catalog, the template includes course-specific links to the exam archives, online readings lists, and information-skill tutorials and training sessions.

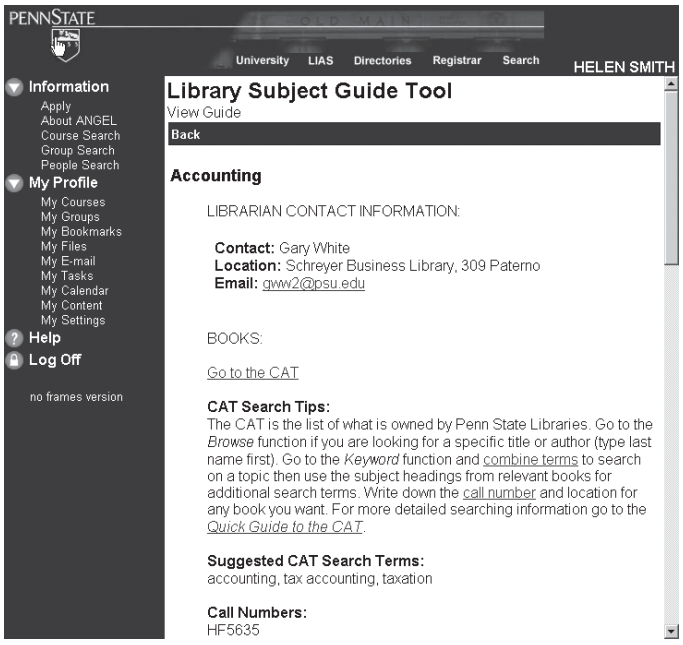

Figure 3
Material reproduced from a presentation by Loanne Snavely and Helen Smith from 2003 ACRL National Conference.
Reprinted with permission.

Communication with Librarians

Usability testing, focus groups, and anecdotal information gathered by the University of Rochester indicate a majority of students are unaware there is a librarian that serves as a subject specialist for each discipline taught on campus (Gibbons 2003). Course-management systems can help to address this problem by increasing the profile and awareness of the expertise the subject librarians possess.

Some CMS have an appropriate area for a librarian to provide a virtual introduction as well as contact information. For example, Blackboard has a Staff Information page where a librarian can add his or her name, phone number and e-mail address as well as a photograph (Cox 2002).

The asynchronous communication of discussion threads in course-management systems provide yet another way the course's librarian can participate in a contextual manner. For instance, with advance permission, the librarian could monitor the discussion threads of the students, offering proactive assistance when a student has a library resource-related question.

While some professors may welcome this just-in-time assistance, others may feel that such discussions should remain limited to just those students enrolled in the course. An alternative approach is to create a discussion thread specifically for communication among the students and the librarian. Students can post research questions and receive advice on search strategies.

An experimental librarian-specific discussion list at the University of Calgary was very successful. Through the context of the students' questions, the librarian was able to introduce many of the core elements of her usual bibliographic instruction session, such as choosing an appropriate database and the use of subject headings. However, this was all done "within the context of the students' research question, and thus the students find [the answers] meaningful" in a way that they would not have if the information were offered in a stand-along bibliographic instruction session (Wheeler and Fournier 2001, 429).

Another library communications idea, suggested by Cox, is for the librarians to hold virtual office hours within the CMS. "Notify students that you will be logged in at a certain time each week and urge them to stop by virtually to ask questions about their research" (Cox 2002, 13).

If the librarian has a particularly strong working relationship with a professor, it might be possible for her to review and comment on the bibliographies and references in student papers. For example, an instructor at Worcester Polytechnic Institute granted the course's librarian permission to view the annotated bibliographies and rough drafts deposited by students into the Digital Dropbox of Blackboard. He viewed these assignments and "offer comments on the quality of the student's research and references, leaving the content and grammar to the faculty member advising the project" (Cox 2002, 13).

Pros and Cons of Micro-Level Strategy

A significant advantage of the micro-level approach is what Shank and Dewald (2003) refer to as the "strategic positioning of library resources and services." The micro-level approach pushes context-appropriate library resources and services to the students in the environment in which they are learning–their course sites.

Within the courseware, there tends to be a blurring of perceived authorship. Naturally, students assume their professor placed anything within the courseware there specifically and deliberately. Consequently, the students give serious consideration to any library resources and services present in their course sites.

If a librarian is able to establish a positive, helpful presence within a course via the courseware system, this may well serve as the foundation for on-going contact between the librarian and student.

However, there are drawbacks with the micro-level approach as well. The customized library resources and services require a significant and on-going commitment from the librarians. A low librarian-to-course ratio can create unachievable expectations.

However, some evidence suggests the level of customization need not be very high. In creating InfoQuest, an online-information skills package for Blackboard, the librarians at Sheffield Hallam University found that while some level of customization was necessary for the skills to seem relevant and engaging, there was a definite generic core of skills common to all disciplines (Moore 2004).

The students expected that the InfoQuest skill activities be performed on resources relevant to their course, such as introducing databases searching using course-relevant databases. However, the skills themselves were generic across most classes.

Following two years of development and use, the librarians at Sheffield Hallam University have settled on the approach that:

> customization can more easily be achieved by adding or deleting from the generic core rather than amending the core of the material itself . . . thus the main strand of learning is generic in its approach, but use of customized examples and customized opportunities for practice will increase engagement and ownership. (Moore 2004, 85)

Another shortcoming of the micro-level approach is the reliance on faculty invitations into the courseware. Just as a librarian would not take in-class time for bibliographic instruction without the express consent of the professor, it is equally as important the librarian not assume ownership of real estate within the CMS without the express permission of the professor. This presumes a pre-existing, positive work relationship between the faculty and librarians (Shank and Dewald 2003).

The above examples are just a small sampling of the many diverse ways in which institutions and individuals are attacking the barriers to library and CMS integration. As of yet, there is no single means to accomplish the vision of a fully integrated online-learning environment. However, there are enough smaller solutions available that almost any institution should be able to make some progress towards that goal today.

Notes

1. A visual demonstration of this process, titled "Reading lists in Blackboard using MetaLib e-shelf," is available from the OLIVE project Web site, wwwedit.wmin.ac.uk/olive/project_deliverables.htm.
2. Quote in e-mail from Corey Davis, Systems and Academic Liaison Librarian, British Columbia Open University, Jan. 27, 2005.
3. Ibid.