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Taking Library Instruction into the Online Classroom: Best Practices for Embedded Librarians

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Abstract

The proliferation of online courses has led librarians to adapt their instructional techniques and follow teaching faculty and students into the online environment. Moving beyond web pages and online research guides, librarians are now becoming instructional partners in online course management systems. Through an online survey of librarians and a literature review, the authors examine best practices for these “embedded librarians.”

Introduction

The number of college students taking online courses has risen substantially over the last several years. According to a report by the Sloan Consortium, nearly 3.5 million American college students were enrolled in an online course in the Fall of 2006. This represents 20% of college students and constitutes a rise of nearly 10% over online enrollments from the previous year (Allen & Seaman, 2007, p.1). Improved student access to courses and increased graduation rates are among the key factors driving the growth of online education, and the trend is expected to continue (p. 2).

Not surprisingly, the rise in online education has decreased the need for students to come to campus, meaning students are less likely to use physical libraries. Although nearly all colleges and university libraries offer online access to research collections, students are 45 times more likely to start information searches at web search engines than at the library web site (89% vs. 2%) (De Rosa, Cantrell, Hawk, & Wilson, 2006, p. 1-7), and they are twice as likely to learn about new information resources from a friend as from a library website (67% vs. 33%) (De Rosa, et al., p. 1-9). In order to remain relevant, libraries are finding it necessary to take their services to students rather than waiting for students to come to them.

Online courses are primarily delivered through course management systems (CMS) that create for students a self-contained learning environment. All assignments are made available inside the CMS for students to view, and when completed, students upload assignments to the instructor within the course module. All communication between students and instructors can take place in discussion boards or email systems within the CMS, and if readings are assigned, they are typically available in the course as an attachment, or at the very least, a direct link to a webpage or article within a database. As students become accustomed to this level of accommodation, they are less likely to venture out to disconnected information sources, especially library websites, which require much more user effort than web search engines (Costello, Lenholt, & Stryker, 2004). In response, libraries and librarians are seeking ways to become a part of the CMS universe -- to “embed” themselves -- in order to offer students a more painless route to library resources.

Similarly, some schools use a CMS to supplement traditional face-to-face classes with the components described above. These “hybrid” classes, as they are often called, exist both in the classroom and online. Some librarians see this online component of the hybrid course as an avenue to extend one-shot face-to-face instruction sessions with classes (Jackson, 2007, p. 459). Many libraries are also offering online information literacy modules in hybrid courses as an alternative to face-to-face instruction. This is one way that libraries are keeping up with increased demand for bibliographic instruction at institutions

where student enrollment is growing while numbers of library faculty are remaining constant or decreasing (Kramer, Lombardo & Lepkowski, 2007).

Library integration into course management systems has been referred to by a variety of names. In 2004, Kearley and Phillips used the term “embedded librarian” to describe the practice of course-level participation in online classes at the University of Wyoming, and it has appeared in the literature repeatedly since (Hearn, 2005; Hedreen, 2005; Ramsay, 2006; York, 2006). Hedreen suggests that the term is borrowed from “embedded journalists” of the Iraq war (2005). Librarians at the University of Missouri St. Louis refer to their embedded librarians as “course librarians” (Bielema, Crocker, Miller, Reynolds-Moehrle, & Shaw, 2005). When a librarian at the University of Wisconsin-Eau Claire monitored discussion boards and sent unsolicited emails to students through her university’s CMS, she used the terms “lurking librarian” and “collaboration by infiltration” to describe her work (Markgraf, 2004, p. 17-18).

The term “embedded librarian” carries different connotations depending on the setting. At Murray State University, a librarian was “embedded” in an academic department, meaning that her physical office was located outside the library and among the department’s faculty in a building across campus (Bartnik, 2007). Some libraries use the term “embedded” to describe librarians’ immersion in the face-to-face classroom settings (Hearn, 2005). Librarians at Meredith College use the term “embedded” to describe their infusion of information literacy education into the general education curriculum (Carlyle Campbell Library, 2007).

The authors will hereafter use the term “embedded librarian” to refer to any librarian who takes an active role inside the online CMS classroom -- be it in completely online or in hybrid classes. Levels of service may range from those who provide universal links to external Web pages to those who offer highly interactive content, mass communications, and one-on-one interactions.

The purpose of this article is to explore best practices for libraries and embedded librarians seeking to enhance services to online students through a CMS.

Methodology

In order to determine the best practices of embedded librarians, the authors sought information via two avenues: a thorough review of the professional literature and an online survey of academic librarians.

The Literature Review

The literature review covered professional library and education literature from the mid-1990s through 2007. The authors searched through English-language publications related to embedded librarians (and the various aforementioned alternate expressions for this practice) and more general forms of library support for online courses.

Course management systems have been categorized in the professional literature by a variety of terms, including “Web-based learning environments” and “asynchronous learning networks” (Beagle, 2000), “courseware” (Getty, Burd, Burns, & Piele, 2000), “course management software packages” (Cox, 2002), “online courses” (Kearley & Phillips, 2004), and “learning management systems” (Jackson, 2007). A quick glance at the software providers’ web pages shows that they have also added their own descriptive labels to their products: “virtual learning environments,” “course website software,” “learning content management systems,” and “virtual classroom systems.”

An analysis of the professional literature on library involvement in these course management systems reveals that while numerous authors have reported their own experiences working in online courses, none have surveyed a diverse sampling of institutions to analyze collectively the services being offered and the instructional methods employed. However, three distinct types of publications did emerge: early calls to action, institutional case-studies, and technical innovations.

Two articles stand out as early calls to action for embedded librarians. Joanne Eustis and Gail McMillan (1998) described some of the challenges academic libraries faced as asynchronous learning was becoming more mainstream. They describe the imperative of dramatic change for libraries that comes with technology-mediated learning. While course management systems are not specifically mentioned, “asynchronous instruction” is considered a major factor in the dramatic changes facing academic libraries (p. 53).

Beagle (2000) noted that library access and resource integration were scarcely mentioned in the professional writing on Web-based learning environments, and that libraries were not being mentioned in software reviews of these products. He hinted at the embedded librarian concept by mentioning librarians who “proposed greater collaboration and participation in the instructional design and delivery process” in online courses (p. 377). Beagle’s article was soon followed by a flurry of institutional case studies that validated this new approach to library instruction.

Other librarians echo these calls to action by bemoaning the lack of library-integration into commercial CMS software packages and the need for librarian involvement in their design and implementation (Machevec, 2001; Shank & Dewald, 2003; Buehler, 2004).

The majority of the publications on library involvement in course management systems have been institution-specific case studies describing the efforts, successes, frustrations, and dreams of librarians who have transitioned their traditional reference and instructional services into their local online course environments. The focus is usually limited to one particular brand of CMS, though the principles of collaboration and innovation are often transferable. A few representative examples are described below.

Piele’s description of using WebCT at the University of Wisconsin-Parkside provides one of the first documented examples of librarians using course-management software (Getty, Burd, Burns, and Piele, 2000). She praises the ability to administer online surveys and quizzes with randomized question sets, automatic grading and record keeping, and the flexibility of the software.

George and Martin (2004) present a nice overview of their experience working with faculty in Blackboard at Eastern Kentucky University. While the focus of their article is on collaboration, they also provide a useful list of specific ideas for integrating library services into the various modules of standard Blackboard classes. This article provides a nice introduction to the topic for new embedded librarians.

York (2006) describes her experience working with online courses in WebCT at Middle Tennessee State University. She provides a day-in-the-life account of her experience, listing the types of questions asked by students and offering suggestions for how to best manage multiple courses while increasing interactions with students and instructors.

Jackson (2007) presents a detailed study of librarian involvement in learning management systems at the California State University’s twenty-three campus system. She found that while librarians were actively collaborating with faculty in the face-to-face classrooms, they were not active in their campuses’ learning management systems. As with much of the literature, one of the major themes of this article is collaboration among librarians, faculty, and the administrators of the campus’s system, and the author gives practical suggestions for how to accomplish this.

The third category of professional literature on library involvement in online courses is more technical in nature. One recent example details an innovation in administering electronic reserve readings inside the CMS. Drew and Flanagan (2007) describe efforts to embrace the direct delivery of information to students inside the course shell by promoting durable links from database vendors and educating faculty on copyright issues. Similarly, Corrado and Moulaison (2006) describe how they used RSS feeds to integrate dynamic lists of new books into the course manage system at The College of New Jersey.

The Survey

In the fall of 2007, the authors submitted a twenty-one question online survey to three e-mail lists inviting academic librarians to report their own experiences participating in online courses. Two of the selected lists were for sections of the Association of College & Research Libraries (ACRL): the Education and Behavioral Sciences Section (EBSS-L) and the Information Literacy Instruction Section (ILI-L). The third list was OFFCAMP-L, a list for off-campus and distance librarians.

The survey was open for ten days and yielded a total of 159 respondents. Participants were given the option of listing their home state and/or institution. Based on the 81 respondents who offered such information, librarians from 36 U.S. states and four Canadian provinces were represented. Librarians from 69 individual institutions chose to identify their schools, with only four schools having more than one respondent.

Online course offerings varied by institution. Survey respondents were asked about the number of exclusively online courses (no face-to-face meetings) offered at their institutions, and the largest percentage (24%) reported more than 100 online courses per semester. Another 21% work at institutions with 10-50 online courses, and 10% offer fewer than 10 per semester. Twenty-two percent were unsure of the number of online courses offered, and 5% percent reported no exclusively online courses.

Institutions which have practicing embedded librarians reported that 73% of their embedded librarians assist completely online courses, while 76% are also embedded in hybrid courses that meet face-to-face and are supplemented by online content.

The librarians who had experience embedding themselves in their campus's online courses proceeded through all 21 questions, while those who had not actively participated in online courses were automatically taken to the end of the survey in which they were asked questions about perceived barriers to such services on their campuses. Because not every question was universally relevant, the number of responses per question ranged from 23 to 159. Several questions featured an optional comments box, and many respondents left remarks that helped frame the authors' discussions of the results.

The results from this survey were analyzed along with the findings from the literature review to determine a set of best practices for embedded librarians.

Best Practices for Embedded Librarians

1) Know your CMS and its administrators

A variety of commercial CMS are available, each with its own special features. Most offer the same basics, including organized access to course content and built-in methods of communicating with instructors and other students, but librarians should get to know their local system, its potential for library instruction, and its limitations.

Seventy-six percent of the survey respondents' institutions use Blackboard or WebCT, which recently merged. Six percent use Angel, 4% use Desire2Learn, and 13% work in a variety of other CMS, including Moodle, Sakai, and Jenzabar. A number of institutions are using multiple CMS, and a few have created their own "home grown" systems.

Most institutions offer their instructors training on using the CMS, and 60% of respondents reported attending such sessions. Training is recommended for librarians not only for learning the ins and outs of the CMS, but also to introduce themselves to IT staff and instructors as interested players in the online curriculum. Just as collaboration with faculty is important in the face-to-face classroom, Riedel also stresses the importance becoming collaborative partners with instructional designers and CMS administrators (2003, p. 483).

Embedded librarians delivering library instruction and services are often subject to software design limitations, though some technically savvy librarians have been able to tweak the CMS to work

more fluidly with library resources (Lawrence, 2006). For example, Blackboard offers “building blocks” that allow for seamless proxied access to libraries’ subscription databases (Blackboard, Inc., 2007; Jackson, 2007, p.459, Lawrence, p. 251). Specialized instruction for librarians is often available upon request from your campus’s CMS administrators.

2) Get a library link in the CMS

One of the easiest ways to embed the library into the CMS is to have a default library tab or link inserted into every new course shell by your CMS administrator. Librarians should advocate, at the very least, for links to library resources in course management systems, and this can be accomplished even if they do not have direct access to individual courses. By working with the CMS administrators on campus, libraries can ask to have a link to the library main page included in the course management template. On a grander scale, some libraries have helped create dynamic library portals that link students to content relevant to their course subject or even their specific course (Lawrence, 2006; Rochester Institute of Technology Libraries, 2003). Such portals may also provide contact information for librarians who are subject specialists.

Fifty-nine percent of survey participants indicated that they maintain links to the library website within the course management system, and 45% manage subject-specific links. Direct links to library resources are important if students are to consider a research option beyond web searches. Moreover, as Cohen (2002) points out, many course management systems link to commercial digital libraries that may charge students an additional fee for content (p. 12).

3) Go beyond the library link

A library link in the CMS is a great start and is often a hard fought battle with reluctant CMS administrators, but librarians should try to do more and get directly involved in individual courses.

Thirty-six percent of the surveyed embedded librarians reported that they provide students with links to specific resources, such as books, articles, and databases. These embedded librarians can confer with students about more specific information needs. While some survey respondents reported communicating with student directly via email (39%) and discussion boards (33%) within courses, other respondents indicated that though they were embedded in courses, they were not added at a level that would allow them to email students or post to discussion boards.

Twenty-two percent of respondents take on an instructor’s role by writing and administering quizzes. Some of these respondents reported that they teach free-standing information literacy courses, while others manage research modules within a variety of courses. Getty et al. (2000) give four examples of information literacy units built into courses using four different course management systems. Unit management is fairly simple in a CMS, since all systems have built in quiz-building and gradebook components. With a few changes, a unit developed for one course can be customized and transferred to another course. This is one advantage over web-based tutorials, which are often fairly generic. Also, library units that are built into for-credit courses may “be taken as seriously as the other course units” (p. 354). Quizzes hosted inside a CMS will often allow for randomized question sets that allow for more flexibility than Web-based tutorials.

4) Don’t over-extend yourself... recruit some help!

Interacting directly with students in an online course can be time-consuming work, and librarians who offer the service are usually adding it on to a full plate of other duties. Embedded librarians also find that the familiar problems of faculty ambivalence and student procrastination occur just as frequently in the virtual classroom. For these reason, many librarians are reluctant to take on very many courses.

Among respondents to this survey who are embedded as active participants in a course, the greatest percentage (41%) are involved in fewer than 5 courses. While some institutions have only one

librarian available for direct embedding in courses, others have many librarians offering the service. The greatest percentage of respondents said that 2-5 librarians are embedded (34%), while 22% have only one librarian at their institutions directly assisting online courses. Of these sole embedding librarians, 69% are managing only 1-5 courses, though 38% of them are working at institutions with more than 50 online courses. Even those institutions with more than one embedded librarian are not reaching many classes. The largest percentage (52%) reported having multiple librarians embedded in only 1-10 total classes per semester. Thirty percent of respondents reported no direct embedding of librarians at their institutions.

Regardless of how many librarians are offering the embedded librarian service, few online courses are being reached by directly embedded librarians. Data from this survey suggest that, at best, librarians are actively involved in no more than 10% of online courses at most institutions. The exception is at institutions where librarians are automatically enrolled in all courses. One respondent commented that “we are in every course whether or not the faculty member uses the CMS.”

In her survey of librarians in the California State University system, Jackson (2007) found that some librarians are daunted by the idea of navigating the CMS without training. Librarians with experience being embedded should set up a training session for other interested librarians, preferably with a CMS administrator who may be able to give trainees instructor access to an empty course shell so that they can explore all aspects of the system (George & Martin, 2004, p. 595).

5) Be strategic with your course selection and your time

Librarians may be embedded for all or part of a semester. In this survey, 45% of respondents check in on courses throughout the semester, while 55% are only actively involved with courses for a portion of a semester surrounding a research assignment. The shorter time commitment is often more convenient for librarians, but it reduces the opportunities for students and the librarian to get to know one another. Librarians who are involved in a course throughout the semester can engage students in the research process earlier, proactively offering search tips. Bielema et al. (2007) observed that “having an ongoing, established role in the progress of the course ... makes the flow of information, the assessment of needs, and the facilitation of requesting assistance (either from student to librarian, librarian to instructor, or instructor to librarian) less intimidating, simpler, and more direct” (p. 340). However, for librarians juggling other demands for their time, a shorter interaction period may be necessary and is certainly preferable to none.

Respondents were also asked how often they check in on courses in which they are embedded: the greatest percentage (26%) only check in on courses once a week; 25% check in a few times a week, but another 25% check in once every day, including weekends; 14% check on courses more than once a day, including weekends, and another 9% check every day but take the weekends off. Based on these results, there is no clear consensus as to how often an embedded librarian should monitor a course. The best answer may lie in the nature of the course (e.g., are there many research assignments or only one?) and the ability of students to access a librarian outside of the CMS (e.g., did the librarian provide an external email address and/or phone number?). One of the most important considerations is that students’ questions are answered promptly. As Bielema et al. point out, in the online world, there is “an expectation of a quick turn-around (usually 24 hours or less)” (p. 342).

When asked whether or not students are required to complete a research assignment in the courses with embedded librarians, 44% responded “often” and another 44% responded “always.” It seems only logical that librarians would be added “precisely because there is a research paper assigned,” as one respondent noted in the comments, but 13% reported that students are only “seldom” or “never” given research assignments. One of the authors of this article frequently finds herself in such courses. It is a better use of a librarian’s time to be embedded only in courses in which students are required to locate resources for an assignment. For courses without an existing research component, the librarian may offer to create a research learning module for the course, as a few respondents noted that they have done.

6) Be an active participant in the class

There are several ways that an embedded librarian can be an active participant in a class. If you are given the authorization, you can post your contact information (and even a personal photograph) in the faculty information section of the CMS course (George & Martin, 2004). It is also helpful to have a faculty member introduce you to the class through the course announcements section.

Another way to be an active participant in the class is to communicate directly with students through discussion boards and email. Some well-meaning faculty require students to participate in library discussion threads hosted by embedded librarians, but as Matthew and Schroeder point out, the result is often “a slew of random questions, unrelated to course content” that can “feel like busy work for both the students and the librarian” (2006, p. 63). Survey respondents revealed that students are *rarely* required to discuss research assignments with embedded librarians. Only 9% of respondents reported that students are “always” required to discuss assignments with the librarian. One respondent noted in the comments section that “one instructor requires my signature on each student’s survey strategy -- each year.” Students are “often” required to consult 19% of surveyed librarians. But students are “seldom” or “never” required to talk to the embedded librarian in 73% of cases (32% and 41%, respectively). Still, most respondents reported a great deal of student contact. According to 70% of respondents, students “often” or “always” contact the embedded librarian (63% and 7%, respectively), and only 30% reported that students “seldom” contact them.

A few respondents noted in the comments section that although students are not required to contact the librarian, they are often encouraged by the instructor to do so. However, other respondents said that faculty rarely acknowledge their presence. Students are far more likely to utilize the embedded librarian if the instructor seems to place value on the service. At a minimum, embedded librarians should ask the instructor to introduce him or her in the course and encourage students to ask questions (Matthew & Schroeder, 2006). The librarian should also remind students of his or her presence at various points during the semester if there has been little interaction (York, 2006).

7) Market your Embedded Librarian service

The majority of survey respondents (62%) reported that they market their embedded librarian services by sending email to faculty. Other ideas included posting information about the service on the library’s Web site, mass-mailing promotional flyers to faculty, posting informative links on the CMS, and directly contacting faculty through departmental meetings, campus workshops, and one-on-one conversations. Twenty-nine percent of the respondents who are practicing embedded librarians reported doing no marketing at all.

As discussed in the introduction, one obstacle to marketing an embedded librarian service is that there is no consensus on what to call this practice. While roughly two-thirds of the survey’s respondents do use the term “embedded librarian” to describe their work, others reported using language like, “my librarian” or “personal librarian” when enrolled in individual courses. One survey respondent referred to his or her role as an “integrated librarian,” and several more noted that they just refer to themselves as “librarians.” This latter group seems to suggest that though the instructional venue and method of delivery has changed, the work of embedded librarians is no different than that of librarians who teach in the face-to-face setting.

Whatever they call it, librarians should clearly describe what they can and will do as an instructional partner in an online class and communicate this with their faculty in order for them to take an interest. A little marketing effort at the beginning will pay dividends in future semesters. As Matthew and Schroeder (2006, p. 62) point out, satisfied instructors will quickly spread the word to their colleagues.

Conclusion

Best practices are ever-changing and ever-evolving. The best practices that emerged from this study point to the continued need for collaboration among librarians, teaching faculty, CMS administrators, and instructional designers.

As more classes continue to be supplemented by or transposed into the online environment, there is an imperative for librarians (and not just *distance* librarians) to get on board. In 2000, Beagle said, "Librarians currently providing support for asynchronous learning environments argue that their experiences should be seen as bellwether for all library services in the future" (p. 377). Eight years later, this has proven to be a very prescient statement.

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