# LMS Embedded Librarianship and the Educational Role of Librarians

## LMS Embedded Librarianship

Librarians have long sought new ways to reach out to their users and support those users' research needs. In the age of limited collections of printed materials, libraries drew researchers and readers into their edifices to make use of the library's resources. With the digitization of many materials, librarians now serve a much more physically distributed clientele that uses the library's resources from home and mobile devices as well as in-house. The movement of librarians into learning management systems (LMSs) has been a natural progression as higher education institutions embraced these tools for supporting teaching and learning. Faculty members have gravitated toward using a secure, online means of interacting and sharing course materials with their students, and librarians have followed along to seize new opportunities to market and supply their services.

The larger idea of embedded librarianship was suggested by Barbara Dewey in her 2004 article on library collaboration within institutions.[1] She recommended that librarians become embedded in various forms and facets of university life. Being embedded might involve serving on university or academic department committees, being located in faculty office areas or academic program buildings, or offering library services to university functions like grant seeking and departmental research teams. Embedding has come to be practiced by physically embedding librarians in these ways, but also by creating collaborations between librarians and faculty in the classroom. Librarians assist faculty with research assignment design and guide students in the practices and skills they need to successfully research topics.

Embedding themselves in classes to interact with students about library research corresponds to a larger librarian role as educator. This role is more crucial than ever, as research into first-year college student experiences shows that students are often overwhelmed by the transition to using academic databases.[2] Opportunities to connect with these students who are new to the academic enterprise, as well as with continuing students, increases the chances for students to benefit from the modeling of research practices and to provide feedback on searching choices. Library directors have risen to this challenge, identifying library instruction services as the most important library service function in one national survey.[3] Institutional support for this role is clear, as is the impetus for instruction in information literacy from professional bodies. The newly developed *Framework for Information Literacy for Higher Education* from the Association of College and Research Libraries was intended to provide new approaches for teaching students the essentials of information literacy in collaboration with teaching faculty.[4]

LMS embedded librarianship takes the embedding concept and librarians' educational role into the virtual environment of the LMS. Embedded librarians connect with faculty, who add the librarians to their LMS course sites in both online and face-to-face courses. The librarian then adds links to library resources, screencasts on using databases or working through the steps of research, citation guidance, and more. The librarian becomes a member of the course, with full access to assignments, course materials, discussion forums, and other resources provided by the instructor. This access gives the librarian insights into the course beyond what is typically available when

planning a one-shot instruction session. It also provides new opportunities to reveal fitting library resources to students in the context of the course. Embedded librarians now have an avenue to gaining student attention, affixing library resources and librarian guidance to assignment pages and within course modules, and impacting students for the duration of the course through pages of linked resources and participation in class discussions.

## Responding to Higher Education Development and Challenges

In addition to the motivations above, LMS embedded librarianship can also address four current trends and challenges in higher education:

- the rise of online learning
- the increasing use of open educational resources (OERs)
- the need to improve digital literacy
- the focus on student success

### The Rise of Online Learning

Students continue to choose online learning options in significant numbers. Somewhere between 5.2 million and 7.1 million students were enrolled in at least one distance education course as of 2013, and while the growth rate of online enrollments has slowed, they continue to grow faster than overall higher education enrollments.[5] This count of online students is limited to completely online courses and does not include hybrid or blended courses, which include a significant percentage of online instruction time. Many students are learning in partially or fully online settings or with significant support from online resources.

This fact provides an opportunity for librarians to serve these online students. Bell identified digital education as an increasing revenue source for institutions and a chance for librarians to reach out and support students and faculty.[6] The growing digital nature of the library collection and the inability of online students to visit the library push librarians to become involved. Librarians are no strangers to online communication with users, but such communication has often been limited to questions from individuals and passive provision of resources on library websites. There is no time like the present to become more active in supporting online education. A survey of academic library directors revealed that fewer than 50 percent of them believed that their libraries were prepared to support students online.[7] Another report provided examples of how academic libraries could provide expertise on instructional design for

online learning to faculty.[8] The practices that embedded librarians have developed are available for others to adapt, improve, and use.

### The Increasing Use of Open Educational Resources (OERs)

Broad concerns about college affordability and a willingness among faculty to share course materials and use the materials of others have driven the creation of open educational resources (OERs) over the past two decades. Repositories of OERs have been created by individual faculty members or associations to share learning objects, including everything from video tutorials and quizzes to textbooks, with their colleagues at no or low cost. "Open" items are generally licensed so that they can be shared with students for free as well, using established systems such as Creative Commons licensing.[9] The aim is to produce high-quality teaching resources that can be shared digitally with a wide audience, possibly saving students from high textbook costs and educators from reinventing the wheel. The LMS provides a structure in which to link or embed OERs for a course.

As faculty members supplement their coursework with freely available, shared educational resources, librarians can play multiple roles in the process. They may serve as locators and gatherers of OER content, helping to connect interested faculty with items that will work within their disciplines, at the right level of study, and with the proper focus for the specific courses.[10] Academic libraries have served as funders and hosts for OER projects, helping to support the efforts of content creators and ensuring that their work will be available over time.[11] Librarians can also supplement digital OER content with articles, e-books, and other licensed database content that can be seamlessly linked from an LMS course site. Embedded librarians can build relationships with faculty that help in all of these aspects of providing OERs, utilizing the searching and collecting skills of an individual who is also knowledgeable about the course content and assignments.

### The Need to Improve Digital Literacy

While the definition of *digital literacy* remains in flux, educators at all levels see improvements in students' digital literacy as crucial. The range of elements included in the term include applying technology in educational activities and evaluating digital sources of information. Current approaches to improving digital literacy suggest preparing higher education faculty to assist students in gaining greater skill in using technology, along with including digital literacy in the

curriculum.[12] Students would become more comfortable with the various facets of digital literacy, from creating online presentations and videos to choosing appropriate sources for their research from search engine results. The goal would be to make sure that students have the skills to make use of technology now and in the future, in academic coursework and the workplace.

The common connection here for faculty and librarians is that digital literacy overlaps with information literacy, and librarians are used to working in digital environments and using technology. While academic librarians may feel that their institutions have only a passing interest in information literacy, paying attention to it only in connection with accreditation or academic integrity campaigns, there appears to be sustained interest in digital literacy. This is partly due to the fact that as digital tools and practices continue to proliferate and change, there are endless new permutations of digital literacy to discuss.[13] Here again, putting librarians in the midst of an online learning environment allows them to connect with students on questions of digital literacy. The academic library profession is providing new tools for these librarians through the *Framework for Information Literacy,* which should help practitioners communicate literacy concepts to students and faculty alike.[14] The LMS embedded librarian is situated on the front lines of connecting information and digital literacy to course activities, whether or not they are formally adopted into the curriculum.

### The Focus on Student Success

Student success, as measured by graduation and retention, is a crucial concern for all institutions. A fundamental motivation is the desire to see all students succeed in earning degrees and meeting their educational goals. A very practical motivation is the need for student tuition dollars, paid by continuing students, to sustain the institution. For public institutions in some states, there is the added motivation of maximizing the amount of state funding the institutions receive by increasing student graduation and retention rates. Educators and administrators are in higher education to see students learn and complete their objectives, and librarians share that aim.

Academic librarians are trying a variety of methods for supporting students and keeping them on track to complete courses and graduate. Many of the instructional efforts practiced by librarians have the underlying goal of making students more successful in their assignments. Now, librarians are trying to quantify the impact they have on students and to find ways to measure their value.[15] Identifying methods of doing so will allow librarians to demonstrate

clearly the importance of their involvement with students and to make a case for the best way to implement future programs. Embedded librarians can help this effort by doing what they do well: becoming part of courses, understanding faculty expectations, and collaborating with faculty to impact students at the moments of greatest need for research assistance, An important element of embedded librarianship is that it often offers prolonged opportunities for the librarian to interact with students and to see the growth of their skills over the duration of the course. Also, Bell stated that he expects increased opportunities to use student data to measure student competencies in research and related skills.[16] These learning analytics measures can be and have been easily implemented within an LMS, which once again puts the embedded librarian right at the heart of a key area of measuring student achievement.

## The LMS Environment

Increases in online learning and in use of LMSs at institutions for both online and face-to-face courses have made LMS embedded librarianship much more feasible and all the more important for librarians. The combination of online courses, hybrid courses, and face-to-face courses leads to increasing use of LMSs. In a 2014 EDUCAUSE survey, 86 percent of faculty respondents reported using an LMS in at least one of their courses; 83 percent of student respondents in the same survey reported using the campus LMS in at least one of their courses, and 56 percent used the LMS in most or all of their courses.[17] The opportunities are there for embedded librarians to reach students and impact their research success.

The LMS market contains a number of major companies. The largest LMS companies in the United States in terms of numbers of institutions served are (in order) Blackboard, Moodle, Canvas, BrightSpace (D2L), and Sakai. There has been much merger and acquisition activity in the market over time, with Blackboard taking on a number of other systems and maintaining a dominant presence. Blackboard currently has a 33.5 percent share of US institutions, not including installations of Angel, a formerly independent LMS that Blackboard still offers under its own name. Canvas is currently growing fastest, with a 40 percent increase in installations between 2013 and 2014, while the other players have remained stable. [18]

Tumbleson and Burke's survey of embedded librarians also found that the companies discussed above, in general, were the dominant LMS vendors.[19] The notable exception was Canvas, which had only a small number of installations at that time. It is good to be aware of the other players in the market, beyond the one currently used at a given institution,

as universities and colleges are prone to change systems, driven largely by economics and user experience. The authors' institution, for example, is now on its third LMS since 2009. Generally, the library will have little input into the choice of an LMS, and librarians will need to become familiar with the platform that is available.

## Largest LMS Companies

*Blackboard*
www.blackboard.com

*Moodle*
https://moodle.org

*Canvas*
www.canvaslms.com

*BrightSpace (D2L)*
www.brightspace.com

*Sakai*
https://sakaiproject.org

All LMSs, regardless of platform, provide a set of common features and capabilities for students, faculty, and librarians. The following items can be utilized by librarians to reach students and share important content:

- **Content pages** can be posted in the course site, whether produced within the LMS content editor interface or created outside as HTML, PDF, or other types of files. This allows the embedded librarian to post a page listing contact information for the librarian, links to useful resources, tutorials, and step-by-step guidance on searching. It also lets the librarian, with permission from the instructor, add specific library resources or links to the larger resource page to other course documents, such as assignments, specific lessons or modules, or the syllabus.
- **E-mailing** students who are enrolled in the course is easy with a built-in e-mail interface. It is often difficult for librarians to communicate with students beyond face-to-face instruction time. The LMS environment allows the librarian to introduce herself to students and have opportunities to remind students of her presence later in the semester or quarter.
- **Discussion boards or forums** are often used by faculty members to provide students a venue to ask questions and to hold discussions of class materials and topics. Some embedded librarians will set up a separate "ask the librarian" board or forum for students' research questions. Other librarians may monitor a general class discussion board, perhaps participating only during times preceding research project due dates. The board or forum offers an opportunity to respond to individuals' questions in a group format so that the entire class can benefit from the responses. It is also a place to post tips or highlight resources away from the embedded librarian resources page.
- **Web conferencing tools** are provided for synchronous interaction with individuals, groups, or the entire class, perhaps involving just chat exchanges, but more likely involving shared video information as well. They can be used for appointment-based research consultation meetings with students in which the librarian demonstrates useful databases and suggests directions for research to take. They could also serve as the location of an online version of a face-to-face instruction session for an entire class.

## The LMS Embedded Librarian Opportunity

Librarians have a great opportunity before them to reach out to students and collaborate with faculty. Embedded librarianship in the LMS builds on librarians' abilities and provision of technology and instructional support to students and faculty. The expertise that librarians continue to grow in instructional design, open educational resources, copyright, and digital learning objects can be brought together in successful partnerships that positively impact students. The material shared in the coming chapters will explore resources and finding tools to link to in the LMS and ways to use the LMS to communicate with students. In addition, there will be a discussion of how to design the LMS embedded presence and technologies to use to organize and convey information that students need.

## Notes

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