Embedding Librarianship in Learning Management Systems
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Embedding Librarianship in Learning Management Systems
A How-to-Do-It Manual for Librarians

Beth E. Tumbleson and John J. Burke

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This work is dedicated with love to my husband Gary, children Jeffrey and Janelle, and parents Philip and Virginia Dennett, who are lifelong learners and supporters of libraries.
—Beth E. Tumbleson

I would like to thank my wife Lynne and children Madeline, Anna, Philip, and Andrew, my parents, and my in-laws.
—John J. Burke
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Preface

Welcome to *Embedding Librarianship in Learning Management Systems: A How-to-Do-It Manual*. This work is all about collaborating with faculty and engaging with students at the point where they begin their research: in their learning management system (LMS) classroom. This book begins a conversation between the authors and the reader in which the LMS embedded librarian experience and best practices will be shared. In return, the authors hope that you will gain knowledge, skills, and insights and will develop or further refine your own embedded program. The authors look forward to hearing your stories of battle for information literacy in the LMS and about your ultimate success. Whether you are already working with classes in your LMS or considering how to begin a pilot, this manual offers guidance and encouragement to academic librarians. You will find questions to ask, examples to explore, tools to use, and best practices to implement in these pages.

The book is based on the authors’ first-hand implementation of LMS embedded librarian services on their campus and undergirded by the professional literature where librarians publish their findings and experiences. Through the process of investigating embedded librarianship, conducting a pilot, and expanding the program, the authors connected with colleagues across the continent who were pioneering in tough terrain and with innovators who were experimenting with emerging technologies and new techniques. The authors are convinced that LMS embedded librarianship is becoming the primary and most productive method for connecting with college and university students, who are increasingly mobile and concerned with course materials and requirements delivered in the LMS. The book includes
our rationale for this approach and much practical guidance to get your embedded librarian service up and running smoothly.

The human factor is the heart of LMS embedded librarianship, although embedded librarians are often swept up in technology issues. The “new” creates great excitement in the minds of many. Commercial vendors introduce emerging technologies, which are then promoted in trade journals, and later analyzed by information and technology professionals at conferences and online. Various angles of the hardware, software, and the market are discussed. Learning management systems are no different. As they are developed, new tools and improved features are made available to enhance teaching and learning. Unfortunately, end users engaged in interacting with one another can be overlooked by developers and marketing magnets.

This focus on the human factor, of supporting the teaching, learning, and research mission on a campus, is the librarian’s forte. For decades, public service librarians have staffed service desks to assist users with their questions related to finding answers and building their knowledge base. Reference librarians engage the individual, listen, discover what is wanted, and seek to point the stakeholder in profitable directions. Instruction librarians, in contrast, step into the classroom and attempt to lead a group of students in new ways of searching for wanted information. Sometimes that instruction librarian even designs curriculum and teaches his own credit course to guide information seekers in the ways of finding, evaluating, and using information published in various formats. Librarians also work in systems, emerging technologies, and digital initiatives in order to provide the infrastructure or improve access to collections and services for end users through the library website, discovery layers, etc. Although these arenas seemingly differ, librarians work as one when they consider foremost the human dimension, the real needs of students, staff, and faculty on campus. This is a librarian’s training and mindset: People matter most.

This, then, is the impetus of undertaking LMS embedded librarianship. Academic librarians who are familiar with their library collections, trained in conducting academic research and its tools, and are comfortable interacting with novice and experienced scholars are ideally suited to share expertise in the single online arena where instructor, students, and librarian may meet to foster intellectual inquiry and empower others in information-seeking. Members of today’s campus community may bypass the physical library as they
rush from classroom to laboratory to cafeteria. Still, there are research intensive periods when undergraduates and graduate students alike are very much in need of an approachable guide who is able and willing to recommend research strategies, library services, and potential resources at the institution and through interlibrary loan or the state’s library consortia.

The LMS makes this meeting easier, more personal, and highly probable since this is the designated space for academic interchange. Working as an LMS embedded librarian is both a proactive approach to library instruction using available technologies and enabling a 24/7 presence. It literally provides access to library collections and services day and night and around the world. Yes, it is a new approach to an old mission: offering information expertise and assistance in research upon request. It is a service valued by those who spend time online and are actively teaching and learning there. It seems obvious that librarians must collaborate with faculty to gain entrance to this LMS world of intellectual engagement. Librarians’ understanding of the ways knowledge is produced, organized, stored, and distributed enlightens and empowers lifelong learners. Once end users understand that interacting with library professionals can be useful, and that librarians are willing to impart practical skills in a world of complex information, students welcome librarians. Soon, they become trusted partners in learning, and then they are invited inside previously closed doors. They are asked to contribute ideas and redesign research assignments to strengthen information literacy. At least, this has been the authors’ experience. It is our sincere hope it will become yours as well.

Embedding Librarianship in Learning Management Systems: A How-to-Do-It Manual contains 9 chapters:

• Chapter 1, “An Introduction to Embedded Librarianship,” offers a definition of embedded librarianship and draws on the professional literature to compare various methods of information literacy instruction with embedded librarianship and to show the need for this approach.
• Chapter 2, “The Embedded Librarian and the LMS,” provides an overview of the LMS and identifies the tools available to the embedded librarian.
• Chapter 3, “Creating a Pilot Program,” details a step-by-step approach to creating a pilot LMS embedded librarian program on your campus.
Preface

- Chapter 4, “Marketing LMS Embedded Librarianship,” covers the process of promoting embedded librarian services to gain new faculty collaborators and to encourage student buy-in and usage.
- Chapter 5, “Building the Embedded Librarian Presence: Instructional Content and Instructional Design,” creates a model for approaching the research needs of a given course or assignment and identifying the proper content to include, with special guidance on creating custom materials.
- Chapter 6, “Online, Face-to-Face, and Hybrid Courses,” compares the different types of classes that can benefit from an embedded librarian’s contributions and provides tips for interacting with students in each setting.
- Chapter 7, “Assessing the Impact of Embedded Librarians,” identifies methods for measuring the effectiveness of the embedded librarian service and the information literacy skills of participating students.
- Chapter 8, “Extending Your Reach While Coping with Workload Issues,” calls on librarians to pause and assess their library programs and priorities, noting the impact on day-to-day workflow, before increasing their investment in embedded librarianship.
- Chapter 9, “Future Developments in Embedded Librarianship,” recommends methods for librarians to stay informed of best practices in LMS embedded librarianship while remaining current on changes in higher education and technology that make an even stronger argument for adopting embedded work.

Finally, an appendix that presents results from the LMS Embedded Librarian Survey, a comprehensive bibliography of both cited and recommended sources for more information, and a helpful index to topics discussed throughout the book are included.

Join the growing community of LMS embedded librarians and contribute to the expanding experience and body of knowledge on the embedded librarians in the LMS discussion list that can be subscribed to at http://listserv.muohio.edu/archives/emlibs.html. Please direct any questions or comments to the authors at Embedded Librarianship@gmail.com.
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We would both like to express appreciation to the library staff at the Gardner-Harvey Library, who enable us to innovate and work productively. We are grateful to colleagues throughout the profession who are leading the way in LMS embedded librarianship and have shared their expertise and experiences with generosity. We celebrate the Miami University faculty, who have collaborated with us by allowing us to embed in their LMS courses and to interact with their students to strengthen information literacy. Special thanks are due to Rob Schorman for supporting our professional development, Janet Hurn for providing leadership in e-learning on campus, Ellenmarie Wahlrab for coordinating the Center for Teaching and Learning, and Carolyn Mason for giving free reign in her nursing LMS courses to the extent of redesigning assignments and presenting at nursing conferences. We are privileged to engage Miami University students in the LMS, in the classroom, and at the library InfoDesk as they pursue scholarly research and move forward with their academic and professional goals. Based on these rewarding relationships, it was possible to write this book and share the learning and teaching vision with readers. Finally, we thank Neal-Schuman Publishers, who encouraged us in the project and especially our editors, Sandy Wood and Patrick Hogan, for their patience and attention to a myriad of details which resulted in a finer publication. Above all, we return thanks to God who bestows blessings daily: life, community, and work which we share herein. Shalom.
The term “embedded” has been applied to journalists who accompany troops into battle. These embedded outsiders gain a firsthand look at experiences that might otherwise only be visible to or communicated by participants. Applying this metaphor to the academic realm, students and faculty are the firsthand participants in courses, completing and assigning work, interacting about course content and requirements, and experiencing the highs and lows of the learning process. When librarians are consulted by students with research assignment questions or asked by a faculty member to provide a library instruction session for a course, they are brought inside the veil for a time. They see the course in part, but not in whole. The librarians’ participation is mediated by others who have seen the assignment or course topics in the context of a larger study. By being embedded, librarians might gain a clearer, more accurate view.

Embeddedness involves more than just gaining perspective. It also allows the outsider to become part of the group through shared learning experiences and goals. The embedded librarian develops a sense of partnership, participation, and community with students and faculty, who recognize the value of librarians and librarianship. In this way, each group develops greater trust and respect for the other. No longer does the library remain a faceless support entity at the periphery of teacher and student interactions; now an available librarian can be relied on for research assistance. While she may be neither fish nor
fowl, neither student nor instructor, the embedded librarian becomes an active participant in the course.

History

Before we begin exploring embedded librarianship in the learning management system (LMS) in earnest, it is helpful to understand the origins and larger context of embedded librarianship. The concept of embedded librarianship includes other types of collaboration between librarians and information-seekers. It is difficult to trace the precise origins of the term, but Shumaker and Tyler provide an excellent overview of its development and uses in their 2007 study. They cite articles by Davenport and Prusak (1993) and Bauwens (1993) that encouraged special librarians to get out of the library and into close contact with those who needed their services. These suggestions on becoming involved more directly in the work of researchers were joined to an even earlier movement in medical librarianship, pioneered by Gertrude Lamb in the early 1970s, which placed clinical librarians on medical teams to supply information to physicians as they made rounds (Lipscomb 2000).

The first use of the phrase “embedded librarian” in print was by Barbara Dewey (2004), who outlined various ways that academic librarians can strategically collaborate on campus. Embedded librarianship in this larger sense takes many forms in an academic setting. There are ways to be embedded physically among the students and faculty one serves, such as the placement of a librarian in a discipline-related classroom or laboratory building or near faculty offices. Historically, there have been branch libraries on college and university campuses that represent this sort of embedding, although they generally include a dedicated physical space and a print material collection (Drewes and Hoffman 2010). A librarian can also embed in the workflow or task process of campus groups by serving as a member of a scientific research group, a team of educators and technologists bringing digital resources into existence, or a faculty learning community. On the instructional side, librarians have participated in regular class meetings for courses (both in person and via Twitter). Dewey also points to librarians participating in campus governance and in campus fundraising efforts (2004), in both cases to connect librarians and libraries to broader campus efforts. Kesselman and Watstein (2010) add the involvement of libraries in scholarly
communication activities, creating metadata and creating digital spaces for scholarship.

**Components**

Embedded librarianship in the LMS is all about being as close as possible to where students are receiving their assignments and gaining instruction and advice from faculty members. Rather than the geographical closeness implied by the embedded methods listed above, this mode recognizes the centrality of the LMS for coursework delivery and class interaction on many campuses. Another metaphor for embedded librarians that fits their online presence is the concept of embedding a video so that it plays right on a web page (rather than linking out to another page or site on which to view it) or embedding a widget on a web page to allow a patron to search a database or instant message (IM) the library (Drewes and Hoffman 2010). Embedding a librarian in the LMS gives the librarian full (or nearly full) access to course materials and course tools. This provides the information a librarian needs to understand course research needs and deadlines and also the means to share information resources and information literacy guidance with students.

The first publication chronicling the appearance of a librarian embedded in an LMS dates from 2001 (Dorner 2001). The initial Blackboard posting of information literacy tutorials for nursing students has inspired a variety of approaches for reaching out to students and recommending resources (see Cox 2002, for another early approach to embedding in the LMS). The embedded model in the LMS today allows for the use of a broad palette of LMS tools and library service offerings. Many detailed descriptions of individual libraries’ embedded programs exist in the literature, and several of them will appear throughout the remaining chapters of the book.

The growth of diverse methods in embedded librarianship has been a highly adaptive process. Librarians have joined faculty members in adopting new features and capabilities that are added within the LMS and also strategically lobbying for their creation. Another key approach for librarians has been to follow the paths trod by the participants in each course: the tools they use are the tools the embedded librarian also chooses. There are often chances to guide students and faculty to adapt their thinking as well by introducing a new tool or use of the LMS.
Chapter 1

A Survey of LMS Embedded Librarians

To give you an overview of some common aspects and activities, the authors conducted a survey of embedded librarians in September 2011 by posting a link to the survey on several library discussion groups (see sidebar for a list of the groups, and see the appendix for a lengthier summary of the survey results). The survey included the question, “What does embedded librarianship include at your institution?” Below is a list of the responses ranked by their frequency of use among the 280 survey respondents (showing the number of respondents who chose that response and their percentage of total respondents; respondents were encouraged to mark all applicable responses).

- Encouragement to contact the embedded librarian for further reference assistance (203)—76 percent
- Links to library databases and other information resources within the course (202)—76 percent
- Individual librarian assigned to one or more participating courses (195)—73 percent
- Library tab or link to the library website in the LMS for all courses (193)—72 percent
- Tutorials, either embedded or linked, in the course (184)—69 percent
- Information on research concepts (i.e., scholarly vs. popular periodicals, plagiarism, citing sources) (177)—66 percent
- Suggested research strategies for course assignments (168)—63 percent
- Instant messaging or chat widgets in the course (69)—26 percent
- Interactive sessions with classes using web conferencing software (Adobe Connect, Elluminate, Wimba, WebEx, etc.) (57)—21 percent
- Synchronous chats with groups of students (37)—14 percent

These results reveal that among the group surveyed most already have a tab or link in their LMS that leads students to the library website. Those practicing embedded librarianship in the LMS tend toward assigning an individual librarian to each course. That librarian is responsible for offering reference assistance and contact information, providing links to additional resources related to the course.
and including access to tutorials, coverage of information literacy concepts, and course-related search strategies. All of these findings correspond well to the image of embedded librarianship presented in the literature and the type of program that this book will prepare you to build at your institution. Of course, there are many unique combinations of services that a given library could employ, so there should be no fear of falling into lockstep with the majority view or unimaginatively “keeping up with the Joneses.”

A total of 201 respondents (72 percent) currently have librarians embedded in LMS courses, while 23 (8 percent) have had librarians embedded in the past. The remaining 20 percent were interested in starting such a service. Of the embedded programs, 48 percent had begun from one to four years ago, with 15 percent just having begun in the last 12 months and 18 percent existing for more than four years. Positive comments from the respondents’ institutions included these two: “They like that the information is in their courses and they don’t have to go looking for it,” and “Students appreciate having direct access to the librarian who taught their session and is familiar with their assignment/prof requirements.”

Further responses from the survey offer a sense of the scope of embedded librarianship. Of the respondents surveyed, 55 percent are located at universities offering graduate degrees and 23 percent are from community colleges, with the remaining 22 percent coming from a mix of four-year colleges and universities, university regional campuses, and for-profit institutions. While respondents were overwhelmingly from institutions in the United States, responses came from librarians in Abu Dhabi, Australia, Canada, England, India, Italy, Jamaica, Malaysia, Mexico, New Zealand, Scotland, and Spain. More data from the survey will be shared in the succeeding chapters (and in summary form in the appendix), but it is clear that embedded librarianship is growing, has elements that appeal to its desired audience, and is a worldwide phenomenon.

**LMS Embedded Librarianship Is the Solution**

[If we are to remain responsive to our users’ diverse information, reference, and research needs, we envision a future in which embedded librarians—and embedded librarianship—are]

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**Library Discussion Groups Where the Survey Was Posted**

- academic_division@sla.lyris.net (Special Libraries Association Academic Division)
- alao@lists.ukrkon.edu (Academic Library Association of Ohio)
- cjc-1@ala.org (ACRL Community and Junior Colleges Section)
- COLLIB-L@ala.org (ACRL College Libraries Section)
- ili-1@ala.org (ACRL Information Literacy Section)
- infolit@ala.org (American Library Association (ALA) Information Literacy Discussion List)
- LIS-INFOLITERACY@JISCMAIL.AC.UK (Chartered Institute of Library and Information Professionals (CILIP) Information Literacy Group)
- ilt-l@ala.org (Library Information Technology Association)
- OCLSCONF@listserv.cmich.edu (Past and present attendees of the Distance Library Services Conference)
- OFFCAMP@listserv.utk.edu (Association of College and Research Libraries (ACRL) Distance Library Services Section)
- ohiolink@lists.ohiolink.edu (OhioLINK Consortium)
- univers@infoserv.inist.fr (International Federation of Library Associations and Institutions (IFLA) Academic and Research Libraries Section)

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Embedded librarianship occurs in the online space familiar to students who log in daily for coursework. LMS embedded librarianship is distinguished from other modes of instruction in that it delivers relevant library resources and services needed by students grappling with course-specific research assignments in the campus LMS. When embedded librarians provide ready access to scholarly electronic collections, research databases, and Web 2.0 tools and tutorials, the research experience becomes less frustrating and more focused for students. Undergraduates associate this familiar online environment with the academic world. They may conveniently login 24/7. Getting started becomes easier for those uncertain how and where to begin research and feeling overwhelmed by so much digital information. By collaborating with faculty, embedded librarians are able to convert traditional methods of instruction to the LMS and maximize delivering research instruction to students as needed.

Maximizes Instructional Efforts

Traditional information literacy instruction has incorporated such methods as the reference desk, research consultations, one-shot instruction sessions, credit courses, and the library website. Through these time-tested, instructional outlets, users who reached out to librarians received research assistance. In contrast, LMS embedded librarianship uses a more proactive and long-term approach to transform the standard fare of instruction.

Reference Services

Reference librarians have traditionally been stationed at public service desks to await patrons who approach with questions. Users are comfortable asking directional questions concerning the photocopier location, library hours, or where a title can be found in the stacks, but are often reluctant to pose in-depth research questions. According to the ERIAL (Ethnographic Research in Illinois Academic Libraries) Project, a two-year, five-campus study, students first seek research help from their professors or peers. After all, the instructor is the subject expert who designed the assignment and will grade it. Students do not typically seek out librarians as research consultants, even when virtual reference services are offered. "Although the majority of IWU
[Illinois Wesleyan University] students struggled with finding the correct database to use, their search terms, locating a known item, and/or technical problems, not one student sought the assistance of a librarian during an observed search” (Asher and Duke 2012b, 83). Librarians speculate as to why reference desk usage has fallen off so drastically.

Many of the articles discussed the possible influences on the decline of reference desk statistics. Major trends in the suggestions are the users’ assumed familiarity with Internet searching and the growth of distance education courses, allowing students to use their local libraries rather than the library of the school offering the course or degree. The reticence of users to admit that they need help may also contribute to the decline, especially as many users feel that web-based products should be as easy to use as their favorite search engine and become easily frustrated when this is not true. (Thomsett-Scott and Reese 2006, 151)

Problem-solving library administrators are reassessing the staffing of these service points to maximize the impact of professional librarians. Some library directors have attempted to address this decline and librarian-student disconnect by having reference librarians circulate through the library building with portable iPads or by providing incoming undergraduates with a “personal librarian,” as they do at Drexel University, where each librarian is assigned 100 students to guide (Oder and Blumenstein 2010). Given current budget cuts and reduced traffic at the reference desk, some are deciding to staff reference with student assistants and/or library support staff, combine public service desks, or even close the reference desk.

A more productive approach to providing information literacy instruction is to proactively show up as embedded librarians in the online learning space faculty and students already frequent. LMS embedded librarianship addresses these troubling issues through partnership with the professor. Once the embedded librarian is endorsed as a valued information expert by the instructor, she becomes an approachable member of the course from the students’ perspective. Next, the librarian becomes informed about assignment details and recommends research strategies and sources to students in their LMS course. Reference assistance is actively delivered online and within the course, where students prefer to conduct research. Once aware of a research obstacle encountered by one student, the embedded
librarian can then use the LMS e-mail tool to notify the entire class with timely search solutions by offering links to named electronic resources. Helping a whole class search effectively can be as easy as assisting one student. As trust develops between students and the embedded librarian, they are more likely to seek out that librarian’s help at the reference desk. Often this research relationship continues from semester to semester.

**Research Consultations**

Research consultations between a student and librarian provide the necessary individualized assistance some students seek. They are ideal for students working on capstone projects and theses, but are also valuable for first year or non-traditional students. Unfortunately, those who stand to benefit do not always request a librarian’s assistance. Faculty report that students are shocked to discover a librarian will meet with them (Armstrong 2012, 45). Some students are unaware that librarians are trained information specialists: “Our participant students did not always think of librarians as individuals with research expertise” (Miller and Murillo 2012, 55).

LMS embedded librarianship enables librarians to introduce themselves to students within the LMS course framework and market their research services. The librarian may easily arrange a consultation with students who e-mail, IM, text, call, or drop-in. Sometimes, instructors will require research consultations with the embedded librarian or offer extra credit to motivate students to work with the collaborating librarian. A professor’s encouragement makes a world of difference to students and the embedded librarian.

**One-Shot Library Instruction Sessions**

Some faculty request one-shot information literacy sessions, either because they respect librarians’ search experience and bibliographic knowledge, or because the institution requires the incorporation of information literacy into the curriculum. These sessions usually are limited in time from 50 to 75 minutes. Students who participate in these sessions, however, may hesitate to raise issues connected with their topics, due to limited time or to preserve their image before peers. Timing the session can be an issue. If it is offered too early in the term, elements are forgotten by students, or if it is offered too close to the assignment deadline, other students may have already completed the research assignment.

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LMS embedded librarianship extends the benefits of one-shots. Often, instructors collaborating with an embedded librarian request a one-shot class so students have the opportunity to practice search techniques with a librarian physically present. This may also happen virtually in online courses, using synchronous software for group instruction. Thus, a crossover between virtual and face-to-face is not uncommon in embedded librarianship.

Follow-up instruction may also ensue. The librarian may post or send students additional tools or strategies at appropriate intervals prior to due dates. Having taught students face-to-face in a computer lab, embedded librarians are aware of the usual pitfalls students encounter narrowing a topic, searching, or citing sources. Anticipating these difficulties, they embed appropriate content. Students may solicit help privately through the LMS e-mail or chat tools, or publicly by posting to a course discussion board or forum. Students may eventually come to rely on librarians as part of their research process. According to the ERIAL Project, some faculty would welcome this integrated library content: “Teaching faculty often expressed a willingness to integrate instructional content into their courses to reinforce the outcomes of a library instruction session” (Armstrong 2012, 40). In this way, more extensive information literacy instruction can be provided.

An ongoing presence by a librarian offers a clear advantage over the typical one-time visits by librarians that are common in face-to-face courses. In the online setting with an embedded librarian students receive support when they need it. They ask questions and receive information when it’s relevant to what they are doing in the course. They are also more likely to seek help when the librarian is integrated into the course, Klinger says. (“Team Teaching” 2008, 6)

**Information Literacy Credit Courses**

When a librarian offers a for-credit course in information literacy, whether as a general introduction or as a discipline-specific research methods course, she is able to set the learning outcomes and curriculum rather than accommodating a professor’s objectives. A for-credit course allows sufficient time to cover a wide array of finding tools, explore a variety of electronic resources, apply search strategies, and synthesize concepts in scholarly communication.
As the librarian lectures, leads discussions, and oversees in-class practicums and student presentations, she sets the pace and establishes relationships with students. Credit-bearing information literacy courses may also be offered entirely online, using modules where students cover concepts and complete exercises. Unfortunately, only a limited number of students may enroll in each section of an elective course. Those sections are also limited in reach by the number of librarians available to teach each term. There may be uneven coverage of research methods courses among the various academic disciplines. Required introductory courses may also lack contextual ties to any discipline.

LMS embedded librarianship addresses these shortcomings by providing relevant research strategies and resources students will need to complete the specific course assignments, whatever the course level, format, or subject. If the embedded librarian has taken the time to develop a full credit course curriculum, he may reformat that content in a just-in-time approach for the LMS courses in which he is embedded. Indeed, the most significant modules or tutorials can readily be copied, embedded, or linked in any number of LMS courses by the embedded librarian so that students learn how to conduct academic research. This extends the embedded librarian’s reach of introducing students to the necessary research strategies and accessing the most relevant library collections.

Library Website

The clear strength of the library website is its accessibility. The online catalog, research databases, interactive research guides or LibGuides, digital tutorials, and Web 2.0 tools can be readily linked and made available 24/7. Unfortunately, few searchers begin here. According to Steven J. Bell, the library website is no longer considered by faculty and students as the gateway to the electronic riches necessary for scholarly research.

Put simply, the library portal as we know it today is unsustainable. It, along with a host of other indicators such as declines in reference questions and shifts from print to e-resources, signals that for academic libraries a ‘let’s just keep doing business as usual’ mentality is a sure path to obsolescence. (Bell 2009)

According to an OCLC survey, “84 percent of the total respondents begin their search for information using a search engine; no
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