2012

If you can make it there, you can make it anywhere: Providing reference and instructional library services in a virtual environment

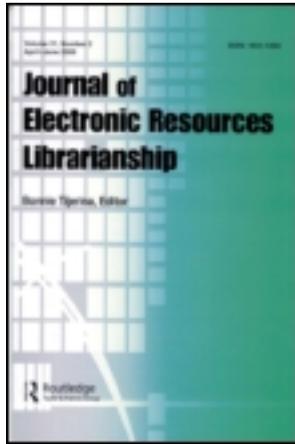Elizabeth Leonard, *Seton Hall University*
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If You Can Make it There, You Can Make it Anywhere: Providing Reference and Instructional Library Services in the Virtual Environment

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Published online: 06 Dec 2012.

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IF YOU CAN MAKE IT THERE, YOU CAN MAKE IT ANYWHERE: PROVIDING REFERENCE AND INSTRUCTIONAL LIBRARY SERVICES IN THE VIRTUAL ENVIRONMENT

Elizabeth Leonard and Maureen J. Morasch

Despite the old-fashioned view of the academic library as a static institution, libraries can and do change in response to the needs of users and stakeholders. Perhaps the most dramatic shift in services has been the transition from a purely physical to a combination physical/virtual or even virtual-only environment. This article examines how twenty-first-century online academic librarians deliver instruction and reference services to their student body and faculty, and it explores the ramifications for the education of future librarians in U.S. library schools, including the areas of technology, instruction, interpersonal skills, and intellectual property.

KEYWORDS Distance learning, online, library, librarians, future, education, LIS education

INTRODUCTION

"A first glance into Cyberspace is like entering a new frontier."

—Hubbard, 1994, as cited by Myburgh, 1997, para. 7

Despite the old-fashioned view of the academic library as a static institution, libraries can and do change in response to the needs of users and stakeholders. Arguably the most dramatic shift in services has been the transition from a purely physical to a combination physical/virtual or even virtual-only environment. This change has been driven by a rapid increase in the numbers of online students; between fall 2006 and fall 2010, the number of learners taking at least one online class rose from 3.5 million to 6.1 million, with the total enrollment in online-degree-granting institutions at more than 19.6 million students (Allen & Seaman, 2011). This growth has required a corresponding shift in the way services are delivered to a student population who learns at a distance and the faculty members who support online teaching and learning. This article examines how twenty-first-century online academic librarians deliver instruction and reference services to this student body and faculty, and it explores the ramifications for the education of future librarians in U.S. library schools.

DEFINITIONS AND TERMINOLOGY

Prior to discussing what an online academic librarian does for his or her students, it is necessary to define the online library and the online librarian. The concept of the *virtual*, or *online*, library has been evolving since the advent of bibliographic databases in the 1960s (Hawthorne, 2008). These initial electronic sources gave way to data sets published by the government (Hawthorne, 2008) and then to resources available on CD-ROM that were usable only with the librarian as intermediary. Eventually, advent of the Internet and microcomputers in the 1990s drove the creation of Internet-based, self-serve information resources (Hawthorne, 2008), which formed the first online libraries. In addition, the growth of these virtual resources has led to a shift from an ownership paradigm to one of a provision of access to the end user, which, according to Martell, Moran, and Saunders (2000), is a central feature of a non-physical library: "the ability to obtain not-owned information electronically without having to rely as heavily on owned information begins the process of disconnecting librarians from their fundamental time and space attachment to the library and its connections" (p. 105).

In this work, we assert that an online library is a collection of resources on the Internet, maintained by library professionals and accessed using technology as an intermediary by users who do not need to be physically located in the same physical place as the resource. Under this definition, very few academic libraries in the United States today do not have an online library, even if the physical library far outsizes the online one. By extension, an online librarian is one who provides services in an online library; a professional who delivers library or information services in an online rather than physical environment using technology as an intermediary to bridge the gap between the user and library professional. Like our definition of an online library, the definition of the online librarians will likely include far more librarians than it excludes.

The use of the term *online* versus other terms, such as *digital* or *virtual*, in this article is a conscious choice. Burke (2002) provides this definition of the virtual library:

> The virtual library environment encompasses the concept of the digital library but is more than a collection of digitized resources. The virtual library provides access to an integrated collection of print, electronic and multimedia resources delivered seamlessly and transparently to users regardless either of their physical location or the location and ownership of the information (para. 9).

However, while Burke may have deemed the term virtual as appropriate in 2002, the authors believe that the term *online* is more appropriate in the year 2012. According to the *Oxford English Dictionary* (2012), *virtual* is defined as "not physically existing as such but made by software to appear to do so from the point of view of the program or the user" (para. 1) while *online* is defined as "designating or relating to a service, resource, etc., available on or performed using a computer network (esp. the Internet); (para. 1) Since a library available via the Internet exists due to programming languages and a wealth of other systems rather than being made by software, the term *virtual* is not as appropriate as *online*, which indicates a library with resources available via the Internet.

A Twenty-First-Century Vision of the Online Reference and Instruction Librarian

The online librarian interacts with his or her patrons via methods mediated by technology. These could be in the form of learning objects, e-mail, chat, a learning- or course-management system, or even a telephone. Like other librarians, online librarians can and may work in subject specialties. For example, electronic resources are managed by electronic resources librarians. Those dealing with programming and websites have been termed *web services librarians*, and those who handle the selection and integration of new programs are generally termed *emerging technology librarians*. One of the least discussed but most often used of the online-library specialties is the online reference and instruction librarian. This lack of recognition may be because most librarians working in the online environment work in a hybrid online/physical environment. Informal surveys by the authors of attendees at the recent 2012 15th Distance Library Services Conference supports this statement (Leonard & Morasch, personal communications, April 18–20, 2012). Also, many libraries seem to assume that the skills used by physical reference and instruction librarians will directly translate to an online environment and thus do not request or seek specialized skill sets.

However, which skills or competencies should librarians working in the online environment have? Marion (2001), in a study of digital library appointment advertisements, did not find any specific set of characteristics that were being sought for librarians working in a digital environment. However, Hastings and Tennant (1996) suggested certain qualities that successful digital librarians need. These librarians must have a willingness and desire to explore changing technological environments as well as the ability to teach themselves to master this environment (Hastings & Tennant, 1996). They must be simultaneously risk takers and pragmatic decision makers (Hastings & Tennant, 1996). We assert that reference and instruction librarians need a broad range of competencies and knowledge, including some not typically taught in library schools, in order to effectively guide and instruct students in the online library.

Technology Competencies

As noted by Burke (2002), the most obvious, but not necessarily the most important, set of competencies and knowledge online librarians need are technological. Online librarians must be comfortable using technology for individual as well as group instruction, for reference interactions via chat and e-mail, and to create learning objects that may improve "findability" and information literacy. In order to accomplish the same information literacy outcomes with online students as on-ground or face-to-face students, online librarians use a variety of technologically mediated instruction tools. Frequently these are either homegrown or modified from existing tools created by other academic librarians. Online librarians must be familiar with, if not highly skilled in, the program languages and software used to create web-based learning objects and instructional tools: "[a] librarian must possess the skills and knowledge necessary to employ the new digital technologies and information formats. Additionally, librarians will have to evolve continually just as the digital technologies and information formats do" (Shank & Bell, 2011, p. 107).

In 1996, Hastings and Tennant (1996) suggested that technology skills could be taught to librarians on the job. A more recent publication notes that these technology

skills are now basic competencies but that online librarians should have additional skills in translating, accessing, and marketing resources (Burke, 2002). As technology in the library becomes more mainstreamed, libraries are generally less willing to perform on-the-job training as there is a larger, more technically adept applicant pool available. Therefore, it would behoove the online librarian to learn new technologies to stay competitive.

Instructional Competencies

In the online environment, every interaction with students is an opportunity for instruction or learning (Wheeler & Fournier, 2001). The growth in information sources available to online students anytime, anywhere has increased the need for research instruction from academic librarians. Digital information sources, unlike books and print journals, are in a constant state of change. Database and ebook interfaces go through continual modifications, website interfaces alter overnight, and new research tools appear frequently. Users need librarians to help them navigate these unending changes: "[an] information seeker in a digital library environment needs a lot of initial training and constant handholding" (Kibirige & DePalo, 2001, p. 286). While students frequently believe they know everything about searching for information online, in actuality they need help from librarians at all points in their research process. Students easily become overwhelmed by the sheer volume of information sources available online. They are unsure of where and how to begin a search when confronted with the online library and so frequently turn to the search tool that is familiar and comfortable: the web search engine. In order to become comfortable using the online library, students need instruction from librarians on how to navigate it. Shank and Bell (2011) describe this instructional role as "the mediator and guide . . . to the ever expanding universe of information" (p. 109). Online librarians act as research guides for students via email or chat reference programs and by creating online guides and tutorials, such as LibGuides or instructional videos.

Instruction for online students can take the form of individual reference, information literacy tutorials or credit courses, guest lectures within an online course space, and more. The challenge is to help the students understand not just how to obtain information but to be able to ascertain whether that information is of high quality (i.e., whether it is credible or scholarly). Students also need to know when to look for scholarly information in library databases and when to use credible information from the web. Scholarly information is not always necessary for course work. For example, peer-reviewed journals are of less importance to the student seeking information to develop a SWOT analysis or to develop demographic reports for a marketing analysis. Yet the student must be able to distinguish between a valid source of data and a less than optimal or even incorrect source of data.

Oakleaf and VanScoy (2010) suggest instructional strategies that online librarians can employ to turn digital reference interactions into instructional opportunities or teachable moments. While many librarians walk students through the search process rather than simply telling them where to go, Oakleaf and VanScoy found the other strategies were underused. These strategies include acknowledging positive information-seeking behaviors; communicating to students what the librarian is thinking and doing during a search; breaking up the chat reference interaction by letting students do some searching while the librarian waits; asking students to describe what they have done already as part of their search; and teaching students tricks that make searching easier. Using a variety of these strategies positively influences student learning during reference interactions by building student confidence, assessing student understanding, and creating a positive library climate.

Interpersonal Competencies

Communication. One of the most important skills for the online academic librarian is the ability to communicate clearly and effectively in writing with students. Because most communication with online students happens via e-mail and chat, librarians must be able to write in a way that is clear and welcoming. The online librarian must also quickly build a relationship with the student by presenting him- or herself as a welcoming and understanding academic resource for the student. Wheeler and Fournier (2001) suggest using an informal style of writing in order to make students feel comfortable and engage them in the interaction. Formalized speech begets formalized interactions, which can often appear unwelcoming in an online environment where words are not mediated by warm facial expressions or open body language.

Effective written communication abilities are a necessity due to the nature of reference instruction in online environments. Since most reference work is conducted in either asynchronous forms (such as e-mail or discussion boards) or using chat services, librarians need to be able to write concise and understandable questions, directions, and explanations for accessing and using information sources. The online librarian must also be able to write clear instructions on where to find and how to use online resources. The difference between writing "hit the search button" and "click the search button on the top right corner of the screen" can make all the difference to a student's satisfaction. Librarians must also be able to use a student's textual communication to infer what the student actually needs. Because there is no body language to read during a reference interview conducted via e-mail or chat, librarians must read between the lines, so to speak, and infer student emotions, understanding, and need from the pauses, language change, and shift of tone in writing.

During synchronous chat reference, librarians need to employ a different type of intuitive perception; this type makes sense of pauses in typing, structuring of phrases, and shifts of tone and allows the librarian the ability to read the correct emotions into the written communication. There are ways to help ensure the online chat librarian encourages positive communication and increases user satisfaction. Kwon and Gregory (2007) found a variety of chat reference behaviors correlated with higher user satisfaction including using the patron's name during the chat, writing in a receptive manner, explaining search strategies and walking them through the search process, providing specific resources, and checking to make sure the question(s) have been answered.

Persuasiveness and Marketing. No matter how polite and supportive the online librarian is, one constant challenge of working with online learners is engaging them in the online environment. The physical library is no longer the center of knowledge, and librarians cannot reach out to and develop relationships with online students during instruction sessions or at the reference desk as they can with on-campus students. In many online programs, students never set foot on campus; these students connect with faculty and academic support staff only through impersonal, technology-mediated methods including telephone, e-mail, text, and chat. Rarely is the academic online library the first stop on a student's information-seeking mission. Rather, when students begin the search for information, they have a choice between using the online library resources or the seductive basic search on the free web. Most likely, such students have looked through free web online resource finders (such as Google) prior to reaching out to a librarian. In the likelihood that students do contact the online librarian, it may be only because the faculty member has specifically mandated the use of library resources. Online librarians must convince students

that using library resources is a better option than using the free web. They do so through effective communication, rhetoric, and marketing.

Relationship Building. Veaner (1995) stated in a report to the Association of College and Research Libraries (ACRL) that librarians need to reaffirm their "key role as a proactive analyst, subject expert, counselor, consultant, linker, and intermediary in the cycle of scholarly endeavor and scholarly communication" (as cited in Kotter, 1999, p. 294). These roles require academic librarians to connect with a variety of campus stakeholders. For the online librarian, the overarching goal of this connecting, or relationship building, is to meet the information and research needs of students wherever they are located. Chung (2010) describes the importance of relationship building through the lens of a liaison librarian in order to collaborate with faculty on projects that will "improve student learning and scholarship through synergistic outcomes" (p. 168). This relationship building is an even more important skill for online librarians because online students, unlike their face-to-face counterparts, cannot walk into the library or have faculty bring them in; librarians must find ways to bring the library to online students.

Barton (2006) notes that a vital part of librarianship is the ability to engage students while not overwhelming them. Connecting online students with the library might best be accomplished through student support services and staff, online faculty, or other academic departments. However, these other departments have their own agendas for meeting student needs and are not likely to give up precious time to meet the library's agenda or even to listen to the librarian's request. And the librarian must not only be able to help students use a variety of information resources but must help them in navigating relationships with other departments on campus, such as student development, career services, and financial aid. In order to connect with and help online students, online librarians must find ways to demonstrate how the library can help these departments meet their agendas. This involves building respectful, trusting, collaborative relationships with campus faculty and student support staff focused on advancing student achievement. These relationships will then provide pathways for connecting the library with the students.

Another means of connecting the library with online students is through faculty. Kotter (1999) believes that the online librarian cannot succeed without the development of positive relationships between librarians and teaching faculty. For online students, faculty may be the first and strongest bridge to the library. Online librarians need to build relationships with these (often unseen) faculty and encourage them to be the bridge between the librarian and students. As part of connecting with faculty, online librarians can educate them about the appropriate sources available to students and how the sources are used, especially those faculty who may not be located on a nearby or even affiliated campus. Educating faculty about the online library is an important step in encouraging students to bypass the familiar and comfortable Internet search tool and use the library's search tools instead.

Building trust with online faculty is also the first step to providing instruction to online students. Getting on-ground faculty to make time for library instruction within an already packed schedule is difficult enough, but the transition to asynchronous online courses has increased the difficulty of providing library instruction to students. While technology is certainly one barrier, it may not be the most substantial; faculty discomfort might be instead. Teaching in another faculty member's online course room is more invasive than providing a 50-minute instruction session in either a lab or classroom. It generally requires allowing a librarian full access to the instructor's world: syllabi, assignments, student interactions, and more. Knowing that another person, even a trusted colleague, has full access to such a personal space can leave an instructor feeling vulnerable. Librarians need to build trust and

respect with disciplined faculty in order to create opportunities to instruct students within their classrooms.

Developing this relationship with faculty can be especially challenging for the online librarian who is not easily visible. Faculty members who do not have relationships with librarians are less likely to see value in the services of the library, so they will not seek out opportunities to collaborate with librarians on projects important to student success. As with any other collaborative situation, the "lack of a strong working relationship before collaboration sometimes results in miscommunication, tension, and even outright failure. In such situations, each side tends to blame the other, reinforcing negative stereotypes held by both [librarians and faculty]" (Kotter, 1999, p. 295). The stereotypes of the opposite party held by both librarians and faculty hinder the ability of both groups to facilitate student achievement. User studies have shown that students rarely use the library unless directed to by their instructors, and faculty are more likely to have students use library resources if they have positive relationships with the library and librarians (Kotter, 1999). Since online instructors are the bridge between the librarian and the students, online librarians must find ways to connect to and build trusting relationships with these often-unseen faculty members.

Flexibility and Adaptability. There is no "one-size-fits-all" when it comes to online reference and library instruction. Every student and every information need is unique. While face-to-face library instruction sessions often take a one-size-fits-all approach, librarians must determine the needs of each individual and be flexible enough to meet the online student where he or she is. Determining need could mean establishing the level of familiarity and comfort a student has with using electronic library resources or using the communication method preferred by the individual in need of help. Therefore, it behooves the online librarian to be able to provide services in a number of milieus, occasionally at the same time. Successful online librarians also require an attitude of iterative self-reflection (Westbrook, 2006); they must continuously evaluate their interactions with students in order to learn what forms of interaction and communication are most helpful to students, which are unhelpful, and then emphasize helpful types during reference work. In 2001, Wheeler and Fournier noted that students preferred e-mailing the librarian to using the Chat product. In 2012, the reverse is entirely true for one of the authors (EL), whose library has five chat reference interactions for every e-mail reference interaction. At the other author's (MM) library, chat reference is not even provided, and a number of online students still prefer to call the librarian rather than use e-mail. Offering multiple methods of contact and determining individual online student's needs is important for successful librarian and student interaction.

Students have differing abilities at articulating information needs during the reference interview process. In fact, if students knew how to articulate what information they were seeking, they likely would not need the services of the online librarian. Therefore, an online reference interview can be a game of hide and seek to find the meaning and real purpose in the student's question. Knowing the broader context (which class and professor) can often help with simpler assignment-related questions, as this may relate to the answer the student is seeking. However, the online librarian may not have information about or access to course assignments, which are often harder to access in the online classroom, or the question may be for a broader research project where the focus is individual to each student. The latter situation frequently requires the online librarian to assume the role of a research mentor and to guide students through their research process. The 2010 report of Project Information Literacy findings showed that students need more help focusing their research topic and

question than they do with searching for information. Head and Eisenberg (2010) stated that "the sheer act of just getting started on research assignments and defining a research inquiry was overwhelming for students—more so than any of the subsequent steps in the research process" (p. 2). One of the authors (MM) has found this to be the case with online graduate students; the majority of her interactions with students have more to do with focusing their research and selecting appropriate terminology and less with locating actual information sources.

Intellectual Property Competencies

Online learning has exponentially expanded the opportunities for U.S. institutions to provide higher education to students residing outside U.S. borders. Sometimes these students are U.S. citizens working or living abroad, but they also may be citizens of other nations, especially developing nations. With the expansion of online education into overseas markets, the online librarian is facing a new challenge: how to ensure all students have equal access to educational materials regardless of the country in which they reside. In their study of challenges Western universities face when implementing online education programs in developing countries, Andersson and Grönlund (2009) found that the international community must come together on the issue of "rules and regulations concerning intellectual property, copyright, filtering and censorship" (p. 7). While it would seem that all students would have access to materials because their educational institution is based in the United States, this is not always the case.

The increased access to information and communication technologies in developing nations has created a new market for Western education, but it has also resulted in increased governmental control over what citizens of developing countries are able to access on the Internet. Restrictions on Internet-mediated information access are becoming more prevalent in developing countries. Hope (2009) states:

> The recent emergence of politically inspired censorship of access to the Internet has limited access for some adult students to Web sites deemed a threat to moral standards or the ruling authority and, in turn, has become a threat to wider uptake of electronically mediated adult education. (p. 85)

One of the authors (MM) was contacted by a faculty member when a student in China could not access required course materials. The materials consisted of streaming videos linked from the BlackBoard course room. The faculty member was hoping that the librarian could find an alternate route to the videos. Unfortunately, the issue in this case was related to the blockage of certain web sites by the Chinese government. Provision of information and intellectual property to students and faculty in other countries requires knowledge of copyright and sharing issues as well as an understanding of national and cultural stances on access to information.

Impact on U.S. Library and Information Science Schools

The wide variety of competencies required by this vision of the online reference and instruction librarian should be reflected in the curricula of U.S. library schools. Since many, if not most, librarians in the twenty-first century will be working in the online environment, library schools must provide opportunities for all students to develop such new world competencies. This will help ensure that U.S. library school graduates are competitive in the global job market.

Technology Competencies

Course work needs to reflect changing times. Information technology coursework should include a basic understanding of technologies central to the online library, including proxy systems, an understanding of programming languages such as XHTML, JavaScript, and the multimedia technologies such as Jing, Camtasia, Flash, and Captivate, used to build asynchronous interactive learning objects. An introduction to the wealth of open-source systems would also be an excellent addition to such curricula, because many academic libraries rely heavily on open-source systems to support library functions. In addition, many libraries are moving to content management systems (CMS) to structure library web sites, and an in-depth understanding of at least one CMS would greatly assist the student. A suggested place to review excellent examples of learning objects is the PRIMO database, from the ACRL's Instruction Section, which "promotes and shares peer-reviewed instructional materials created by librarians to teach people about discovering, accessing and evaluating information in networked environments" (*PRIMO*, n.d., para. 1).

Interpersonal Competencies

Another course that would prove useful is that of relationship building. Most library students have education in management styles, but few have any introduction or understanding of how to build consensus, develop collaborative projects, or maintain client relationships. This may be due to the resistance by many old-school librarians to see the library as a business and their job as active rather than passive. It would be helpful for library schools to reach out to local business schools in order to adapt business relationship courses to the library environment. If such courses are not available, the library student should attempt to take course work at a local business school to develop this crucial skill.

Finally, learning to write in an informative yet conversational style will also help the online librarian, since the online environment consists mostly of written communication, whether directly to the student or via pre-recorded multimedia instructional material.

Instructional Competencies

The online academic librarian also needs a variety of instructional skills, including instructional design, assessment, pedagogy, and learning theory. Online librarians need to understand how to create learning objects and materials that will produce the desired learning outcomes and bring together technology and eLearning. Additionally, they need to be able to properly assess learning using methodologies appropriate to the type of learning. Students possess a variety of learning characteristics and cognitive abilities, and online librarians should learn pedagogy that allows them to teach this diverse population. An understanding of instructional theory is also beneficial for online librarians since they must determine which types of learning and assessment are appropriate for their students' levels of research and education. Additionally, the online librarian should comprehend and be able to apply and assess the ACRL's Standards for Information Literacy (2008), because these are the standards used in academia to assess information literacy competencies.

However, teaching in the online environment is more than just information-literacy pedagogy. The online librarian needs to be able to adapt online writing and instructional styles to match the needs of the students or curricula.

Intellectual Property Competencies

Librarians no longer work in a vacuum; it is no longer enough to understand how to organize, access, and manage information in a North American context. Online degree programs are international, so issues of property ownership, copyright, and access also are international. Online librarians need knowledge to help navigate and negotiate information access for students and faculty from around the world. Library schools would do well to offer courses focused on international issues in intellectual property rights, access, and sharing.

FUTURE OF ONLINE ACADEMIC LIBRARIANS

The keys to the future relevance of the online academic librarian are the willingness and ability to adapt. There will never be a static standard; online librarians who do not continue to learn and expand their skill set will quickly find themselves out of date. The online student of the future will continue to become ever more technologically savvy and will expect the librarian to at least keep up, if not have more technological expertise. Without a commitment to lifelong technological learning, the online reference and instruction librarian will find her- or himself unemployable. Additionally, the librarian must also provide expertise to students around the world, which requires a greater understanding of international copyright, and to deliver and assess learning in an online environment. In order to achieve this goal and remain relevant in the academy of the future, the online academic librarian will require superior communication skills that will allow them to develop relationships with students and leverage relationships with key academic personnel.

The challenge for the online reference and instruction librarian is to engage the student in this milieu. In 1998, Sloan stated that "one would almost get the impression that the service tradition of the physical library will be unnecessary and redundant in the digital library environment" (p. 117). The impression of self-service may exist, but the reality is far from it. Service is even more important in the online library than in a physical library, for most users need information literacy education before they can use both the online library and the free web with accuracy. The online reference and instruction librarian must become an ambassador and guide for students on their journey for credible and accurate information and help students build an appreciation for quality resources and lifelong learning. Yet, information literacy will address only part of this challenge. Online librarians need to find new ways to engage online students with the library instead of attempting to replicate the experiences and services of a physical library.

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