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Huwe, Terence
Lefevre, Julie

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Julie Lefevre & Terence K. Huwe

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Digital Publishing from the Library: A New Core Competency

JULIE LEFEVRE

Institute of Governmental Studies, University of California-Berkeley, Berkeley, California, USA

TERENCE K. HUWE

Institute for Research on Labor and Employment, University of California-Berkeley, Berkeley, California, USA

In the earlier years of the Web, libraries focused on moving services online and building digital collections, but in recent years, libraries have emerged as key players in the world of digital publishing. Librarians possess all of the necessary skills to act as digital publishers; they join the ranks of many others who have discovered the barriers around digital publishing are lower than ever. Library-based digital publishing solutions have matured to a point that the act of digital publishing could—and should—become a new core competency for the library profession. To explore this hypothesis, the researchers offer a working definition of digital publishing and assess the key roles that traditional publishers have historically offered over time. They find that librarians already possess the requisite skills to become digital publishers, and the collaborative culture of the library profession is a strength for this new role. Examples of digital publishing from two libraries at the University of California-Berkeley offer a proof of concept. Services at these libraries include the conceptualization of overall Web site strategies, a content plan that emphasizes distinctive and original material, and special projects that promote digital publishing at the local level, even as they take advantage of campus- or system-level services. Researchers find that offering library-based Web publishing services can reinforce overall

information management programs and also advance the status of libraries within their respective host organizations. The comparative ease of digital publishing has opened an opportunity for librarians to follow the user as they use the Web in creative ways.

The pace of innovation in digital media has deeply influenced the practice of librarianship. Librarians routinely assume a wide array of new roles using new media, including managing the lifecycle of text- and image-based digital files, developing mobile apps, integrating social media into library services, and exploiting the potential of cloud-based applications. New-generation librarians enter the field with comprehensive digital information skills, offering fresh energy for repositioning the profession in the twenty-first century.

The World Wide Web provides a space for experimentation but also continues a longstanding process of knowledge dissemination: publishing. Librarians staked an early claim in digital publishing by building robust Web sites, debating the future of intellectual property and copyright at the international level, and testing new ways to publish online. This history in the Web environment enables librarians to become full-scale digital publishers, crafting robust ways of using digital media in support of scholarship.

Digital publishing as an idea is partially obscured by the general tendency to view library-based Web services as a series of related projects and ventures but not necessarily a unified program to manage digital information in all its forms. At the same time, wholly new areas of digital expertise compete for librarians' attention. These include digital curation, rights management, and "digital scholarship": the wholesale relocation of teaching and research to online domains. Yet within this larger context of innovation, digital publishing advances have made its long-term potential more visible and obvious. The profession faces a new opportunity to establish digital publishing as a core competency, and to do so is essentially a matter of recognizing what is already under way.

Framing the full array of library-based Web and digital media services as "digital publishing" is a relatively new concept, and definitions are still in an evolutionary stage. John Battelle, one of the founders of *Wired* magazine and a leading commentator, offers one of the better summations: "Publishing means connecting a community through the art and science of communication" (Battelle 2010). His broad definition encompasses process and also captures a new reality in the publishing world: Engaging with readers takes many forms. General definitions from popular Web reference sites offer simple explanations, stating that books and other works can appear as Web

sites, audio materials, and more (Tomlinson 2013). Wikipedia defines "electronic publishing" as a series of content creation procedures (Wikipedia 2013). John W. Warren of the RAND Corporation wrote that publishing in the future will be "more about managing digital assets and metadata for increased customization and findability" (Warren 2010, 48). Part of the problem lies in the absence of formal standards, which would offer stability. During the 2011 election cycle for the International Digital Publishing Forum board, candidates acknowledged that standards and definitions are works in progress. One candidate, Rob Reynolds of MBS Direct Digital, an e-learning firm, asserted he would "advance the creation of digital content standards and the evolving definition of publishing across the [publishing] industry" (Reynolds 2011). Although definitions are emerging, those who are most closely associated with the work itself are still in search of consensus.

The evolutionary dialogue about the future of digital publishing suggests the intellectual terrain is still open to interpretation, creating opportunities for the library profession and others who possess insight and expertise about how readers use digital artifacts. For this article's investigation, we offer this working definition of digital publishing as a core competency for the profession:

> Digital publishing is a role of agency in creating and disseminating text and visual artifacts in a networked electronic environment. It constitutes a comprehensive content management service libraries can offer to user communities as part of their overall mission. It encompasses both formal and casual styles of electronic publishing, ranging from peer-reviewed e-journals and policy reports to blogs and social media. It includes robust metadata, cross-platform document design, rigorous editing and quality control, adherence to requisite copyright and commercial laws, and attention to long-term preservation strategies.

Under this definition, digital publishing encompasses all the work related to content creation, content acquisition, and long-term preservation of digital content that originates with libraries or that is acquired and managed by them. Currently, digital publishing goes by many names, such as electronic resources management or electronic content aggregation. But as descriptive as these names are, they do not fully define the growing importance of digital publishing from the library, particularly from a strategic viewpoint. Indeed, the percentage of time librarians already devote to digital publishing is a key element in the hypothesis that it is becoming a new core competency with a significant value proposition.

Armed with a working definition, we evaluate digital publishing and assess whether library skills are closely akin to publishing skills. The assertion that digital publishing can be a new core competency for the library profession is demonstrated in two case studies which describe how digital publishing evolved at two libraries at the University of California-Berkeley. We

further assert that the library profession faces a clear choice: either embrace digital publishing as a core competency or risk losing the opportunity to serve user communities in the dynamic arena of user-generated Web content.

DIGITAL PUBLISHING: THE LIBRARY'S VALUE PROPOSITION

Three trends fuel the growth of digital publishing. First, the forces of digital convergence and new technology have lowered the barriers to publishing in general, and more people know how to act as digital publishers on the Web. A review of curricula for fields such as commercial publishing, communications, information science, librarianship, and related lines of work reveals striking similarities; for example, Rosemont College's graduate degree in e-publishing covers skills that are also common to journalists, editors, librarians, analysts, and Web administrators (Rosemont College 2010).

Digital information management skills are more transferable than ever. Journalists now practice computer-assisted journalism and are expert researchers in their own right. Authors can choose to act as their own publisher, using the Web to circumvent the traditional publishing process. Information technologists and programmers have added skills in assessing human factors and are much more attuned to the challenges people face as they search networked information and use Web interfaces. Similarly, there is a natural fit between the publishing process and the practice of librarianship, which has retained a strong focus on how people use information in all its forms.

Second, there is growing demand for help in digital publishing on the Web and other platforms, and librarians are well-positioned to offer support. In both academic and corporate settings, it is common for a variety of departments to offer Web publishing services. Web service providers might be found anywhere: in technical support departments, corporate communications offices, public relations offices, central administrative offices, and more. They are able to offer digital publishing services because their staff possesses the necessary skills, and the general demand for effective digital publishing is high. Even so, many user communities continue to be under-served, ill-served, or not served at all. This opens an opportunity for librarians to offer targeted Web publishing services and offer advice on how to develop a comprehensive digital publishing strategy, which is quickly becoming a crucial element for most contemporary organizations.

At the same time, independent authors who act as their own publishers often find their e-books go undiscovered, that they lack polish in formatting and style, and that professional editing is crucial. Here again, librarians have ready-made skills to offer. They inhabit a professional sphere that encompasses skills in the technical workings of the Web and also a growing degree of familiarity with the rigorous work of creating, editing, and producing

a quality digital product. With desktop publishing programs increasingly merged with Web development software, developers can create digital files for the Web that may also be repurposed as print documents. Therefore, layout and design—crucial features of quality print or digital publications—may have a place in the array of skills librarians must possess as the Web evolves.

University library Web sites, which attract millions of visitors, are among the finest and most prolific digital publishing platforms, even though they are not commercially focused. Therefore, in a sea of multiple service providers, libraries are just as capable of offering digital publishing as any other player. The key conceptual challenge in grasping the viability of digital publishing as a core competency is to perceive that converging technologies are increasingly being folded into long-term conceptions of what collections and services are all about in a digital library environment.

Third, with the publishing marketplace in a deep state of flux and transferable skills widely dispersed throughout all of the knowledge-handling professions, there is no obvious reason why librarians or anyone else should refrain from experimentation with digital publishing. Effective user services require that librarians develop collaborative solutions, and this makes them useful partners for others who are developing digital publishing strategies. Moreover, a wide variety of Web users who are already developing creative works with sophisticated text documents, videos, simulations, and data analyses are within reach, and they also are looking for collaborators.

CONVERGING SKILLS

If librarians are to consider digital publishing as a potential core competency, it is important to establish how the process of publishing—whether commercial or not—operates. Publishers' fundamental work classically falls in four categories: agency, editorial, design and marketing, and sales (Fister 2001). However, just like everyone else, publishers must develop a fifth category in response to the digital era: digital media skills. Converging digital technologies open all five functions to those with the right experience, including librarians. Taken one by one, these categories illustrate how the activities librarians and publishers have performed over time are converging to such a degree that the digital publisher role is well within reach of the library profession.

Agency

Librarians work very closely with faculty members, who provide opportunities to learn a great deal about scholarly publishing. Librarians are becoming experts in copyright and open-access publishing, and many are authors and

editors themselves. They also manage large Web sites and use content management systems, such as Drupal, Joomla, and WordPress, that involve direct contact with content creators and frequently require editorial involvement. Because of this pervasive involvement in knowledge creation, librarians interact with authors in ways that are strikingly similar to acquisition editors and other publishing staff.

Editorial Work

In addition to editing newsletters, library publications, and peer-reviewed journals and books, many individual librarians have also gained substantial experience in editing information for the Web and for distribution via social media. Academic librarians, who are encouraged or required to write for professional publication and who are familiar with the requirements of usage and style from their graduate studies, are rapidly becoming *de facto* editors by virtue of their digital publishing activity on the Web. Digital publishing has become a consumer-driven process, as is already seen in the self-publishing sector of Web services, and new opportunities will appear for those who can expand their editorial skills.

Design and Marketing

Production and marketing are dominated by Web technology, making it possible for Web administrators, librarians, news centers, and public affairs departments to use digital technology to their advantage. Desktop publishing skills, once aimed solely at print media, have become powerful tools for generating digital publications of many varieties, including the open source ePub format for e-books. Electronic files can be repurposed for the Web to take advantage of various publishing platforms, and this role is open to anyone who can use the requisite software. Professional-quality document design has become necessary in a wide variety of fields, including librarianship. Individual librarians who know or can learn how to use the dominant desktop publishing programs can use this skill in high-quality document creation as a selling point in developing a library-based digital publishing initiative.

At the same time, marketing itself is evolving quickly. Viral marketing that begins with Twitter and Facebook can boost sales—or download traffic—in quick spurts of activity. Professionals involved in outreach and marketing are experimenting with the new potential of Web publishing in conjunction with social media, further leveling the playing field. Self-publishing authors find marketing is their principal challenge, since the name of an established publishing house still gives an imprimatur. However, universities also carry an imprimatur, and this is a chief reason why

academic library Web sites are becoming repositories and outlets in addition to aggregators of digital information products.

Sales

With the transition to digital products, publishers are increasingly favoring licensing-based models of distribution, which have in many cases negatively affected libraries' ability to acquire and distribute content. By expanding their role into digital publishing, libraries could acquire, publish, or curate material in-house, avoiding these restrictions. Sales continue to define the transactional relationship between creator and consumer, but on the Web, the barriers around setting up a dissemination outlet are constantly shrinking. At the same time, managing the full lifecycle of knowledge resources and generating high download traffic are vital parts of distribution, inspiring efforts to build long-term relationships with readers. Publishers have made significant strides in developing post-purchase relationships with their readers, employing interactive features and author Web sites to sustain interest. The same paradigm for relationship building can work well for anyone who possesses the right skills, which are learned by handling Web administration, using social media, and trial and error. Librarians in particular have gained considerable experience in building collaborative outreach efforts, which lend themselves well to the sales process.

Digital Media Skills

Librarians have overseen complex digital libraries for many years and are well positioned to take on an expert role as digital publishers. Traditional print publishers have been playing a game of catch-up with digital technology, primarily because legacy publishing requires substantial resources and staff expertise. But once new technology becomes widely available, it is possible for formerly hidebound industries to take sudden leaps of innovation, and so the publishing industry is engaged in experimentation on a broad scale. Publishers are focusing on reader forums, author Web sites, and tie-in materials that create information ecologies around authors and book series. This process enlivens both their new catalogs and their backlists. These recent initiatives show that publishers have the mettle to change with the times and experiment with new ways to reach their readers to take better advantage of new media.

At the same time, the library profession is enjoying an influx of personnel who may not focus on the historically sharp distinction between print and digital publishing. As a result, libraries have become test beds for trying new and bold ideas, particularly in online education. With a strong urge to take advantage of digital solutions, librarians have become competitive in

the technological arena and bring direct knowledge of user preferences into their development projects.

FORMAL AND INFORMAL, GLOBAL AND LOCAL

Academic libraries oversee a digital crossroads of repositories, datasets, and library databases as well as local published reports and policy briefs. At the campus level, library-based publishing utilities offer a wealth of options for electronically publishing pre- and post-prints and e-journals and e-books. Librarians are lead developers in areas such as data management tools and Web archiving. The University of California's California Digital Library has become a clearinghouse for such activities, and many other universities have formed their own digital publishing services. Universities have also created consortia that share resources and expertise across organizational boundaries. The sustained investment in digital publishing at the organizational and consortial level has already formalized digital publishing skills within the library profession.

At the same time, local content creation continues in myriad places, and system-level digital publishing utilities, however excellent they might be, do not reach all potential customers and capture all intellectual output. Librarians who are involved in local-level user communities already educate their users about existing enterprise-level publishing services, and they can also offer their own digital publishing solutions that dovetail with existing tools and services. Digital publishing at the local level can also emphasize informal publications, simulations, and policy briefs that nonetheless have academic value. Even in instances where content management systems such as WordPress or Drupal are used to empower users to upload their own content, there is still a role for expert assistance, which can be offered by the library as another service to patrons.

Librarians can reframe their identities in ways that go beyond traditional librarianship, using digital technology to build new relationships and publishing digital media to the Web in distinctive ways. This work can exist both in the form of sophisticated, system-level publishing tools and as strategically organized use of local Web sites, social media, and cloud-based services. All the tools needed to make digital publishing a core competency for the library profession have existed for some time; however, library literature has only begun to report on this trend in recent years, as the following review illustrates.

LITERATURE REVIEW

Librarians were quick to see the Web's potential as a tool to further their reach into user communities, and as a result, their initial strategies focused

more on updating existing information-management skills and making them relevant to the new platform than wholesale experimentation with new roles such as digital curation or digital publishing. Consequently, the pace of experimentation with Web management has produced a steady stream of insights about the transferrable nature of various Web skills. A number of articles have emphasized how librarians and library staff who manage Web resources have gained substantial ability in project management and that these skills are both transferable and in demand (Burich et al. 2006, 18; Fagan and Keach 2011, 2). The value of outreach activity has been another recurring theme; Jeanie Welch (2005, 225) outlined crucial activities involving partners, such as fundraising and how library Web services can strengthen alliances. Leslie Delserone, Julia Kelly, and Jody Kempf (2010, 33) evaluated a robust outreach effort conducted at the University of Minnesota in broad terms, where the Web played a supporting role in the development of innovative services. Susan Hubbs Motin and Pamela Salela (2006, 5) assessed the potential of library liaisons (or "embedded" librarians) as enablers of effective teamwork, and Charity Hope and Christina Peterson (2002, 24) emphasized the importance of collaboration across all outreach activity and the growing dominance of Web-based initiatives.

As more and more academic librarians consolidated their presence on the Web and enriched library Web sites, it became increasingly clear that digital media were changing the entire organization of the library and its host organizations. This pace of change in turn led to greater interest in what new roles librarians could play in evolving organizations. Around 2005, the literature began to reflect the perceived importance of library Web sites—Welch (2005) described the academic library Web site as an "electronic welcome mat" (226)—along with the idea that the Web site could be an impetus for facilitating collaboration within an organization (Motin and Salela 2006, 10). Erik Mitchell (2011, 148) enumerated the challenges facing academic library Web sites, arguing that new skills were needed as work styles continued to evolve. He questioned when Web sites should be managed by editors rather than Web developers. He found that highly-skilled Web developers might be hired only to find themselves stretched thinly across related but distinct tasks such as marketing, updating, and outreach. He also identified the emerging potential of cloud-based systems and their benefits in saving time. Debra Riley-Huff (2009, 65) identified Web services as public services and stated that librarians must adopt an activist culture built upon aggressive attention to emerging digital technologies, cooperative relationships, and a focus on customers. As more coordinated approaches to Web oversight appeared, it became clear to managers that content provision had crucial strategic value and that the location of content was also diffuse. This distributed information ecology created opportunities to leverage library-based skills (Frumkin and Reese 2011, 810). Much attention has also been given to the hazards of passive behavior during the digital era. Isaac Gilman and Marita Kunkel

(2010, 22) argued that librarians should take a more active role in content creation, dissemination, and preservation of internally-produced scholarship. They cited this strategy as a means for advancing librarians' academic status in the eyes of the faculty, but their argument is germane to the endeavor of Web services in and of themselves.

After ten years of Web development and administration, library literature began reporting on intensive study of the "user experience," the collapsing boundaries between academic disciplines, and the need to develop comprehensive online environments. Brian Detlor and Vivian Lewis (2006, 251) found that the interactive Web requires library Web administrators to rethink their assumptions and to offer users a rich and interactive experience. Carla Stoffle and Cheryl Cuillier (2010, 131) argued that in order to thrive, the library must formulate an overall strategic approach that encompasses all activities within its host organization, including Web services, venturing quite close to recognizing that Web services are growing into a form of digital publishing. Shu Liu (2008, 6) provided a comprehensive overview of how academic libraries can harness Web 2.0, forecasting that providing rich media experiences and harnessing collective intelligence will become essential. A 2007 Ithaka report asserted that libraries play a key role in developing innovative Web tools to make scholarship available online (Brown, Griffiths, and Rascoff 2007, 31). Kevin Hawkins also noted in a presentation to visitors at the University of Michigan Libraries that evolving Web technology makes it possible for libraries to build Web services that benefit their specific communities (2004). By 2009–10, it became clear that digital services had diversified the opportunities for academic publishing beyond the traditional university-press-printed monograph. Megan Oakleaf (2010, 6) noted that libraries, as the academic heart of a university, are deeply connected to disciplines and departments and are well positioned to provide services that demonstrate the library's value throughout the institution.

Although the literature has provided many insights about how to manage library Web services, the idea of the library acting as the digital publisher has only recently gained attention. This new attention has come in two waves. The first was triggered in 2007–9 by the maturation of institutional repositories and their obvious potential for a number of related publishing activities. Karla Hahn (2008, 23) identified publishing services as an emerging role for libraries, particularly with respect to services such as DSpace and the Berkeley Electronic Press's Digital Commons (http://www.dspace.org; http://www.bepress.com). Other library-based projects demonstrate the library's potential role as a digital publisher by focusing on the new digital-to-digital workflow in scholarly publishing. The Scholarly Publishing Office at the University of Michigan Library has built a low-cost, scalable publishing model that supports digital and print publication of monographs and journals (Jöttkandt, Willinksy, and Kimball 2009). Similarly, Griffith University (Australia) closely incorporated the library in a project to develop new service

models, including online publishing, tacitly acknowledging librarians' contributions to a university's research impact (O'Brien 2010). The Sydney University Press was re-launched in 2003 under library management focusing on digital and print-on-demand works. Colin Steele (2008) asserted that this hybrid approach, mixing curation, management, and access to digital scholarship will result in better access to this content.

The second wave of interest is more recent, although the seeds can be seen as early as 2009. The second wave is characterized by growing interest in user services that emphasize creativity. This trend is sometimes referred as "maker culture": providing users with the tools they need to become authors, artists, or any other kind of "maker" (Enis 2012; Koerber 2012). Collaborative technologies have advanced to such an extent that they are creating opportunities to reframe Web services as a form of digital publishing with high production standards.

In the past three to five years, digital publishing as a library-based competency has begun to appear in the literature, perhaps as a result of the rise of maker culture but also in response to the parallel interest in digital curation and digital scholarship. However, it is at this juncture that awareness begins to grow that the actual publishing process, shifted to a digital platform, carries considerable continuity and can be viewed as a distinct set of skills. Janeke Adema and Birgit Schmidt (2010, 28) made a strong case for collaborative, open-access book publishing, whether in concert with publishers or as lone agents. Tyler Walters and Katherine Skinner recommended librarians use their position to take on new roles in content production through e-publishing (2011, 6). Walt Crawford (2012, 39) found considerable inspiration in "micropublishing": libraries providing space, equipment, and software that allow users to publish their own print and electronic books. Nate Hill (2012) echoed the potential of this enabling role in the context of public libraries, although the same principles could apply in academic settings, especially in conjunction with large-scale publishing tools such as DSpace. Jennifer Howard (2013) noted the number of academic libraries involved in publishing services has expanded rapidly, and the concept is gaining traction through collaboration. She described how more than 50 academic libraries have launched the Library Publishing Coalition to promote new projects and ongoing development. Serious collaboration among institutions is a common signal that an idea is gaining broader acceptance, and the emergence of consortia devoted to digital publishing suggests the profession at large is becoming aware of its potential.

These are examples of homegrown initiatives that clearly depend on mettle and imagination, but at the same time, library software vendors are beginning to add creative functions to their products. In October 2012, Auto-Graphics integrated self-publishing software into its library management software (http://www.ac-canada.com). The software links with OnDemand's Espresso Book Machine, which enables patrons to print their own book

even as the ePub and PDF document formats enable them to host them online (Schwartz 2012; http://www.ondemandbooks.com).

These recent developments suggest that the information professions are furthering their awareness of how digital publishing can include not only the library's own content but the content of others. The growing importance of digital publishing in the overall university environment is also strengthened by institution-level publishing tools for the creation of e-journals, e-books, and more (Hahn 2008, 25). However, universities are not alone in discovering the potential of empowering Internet users to publish their own material. Venture capitalists continue to fund new ideas that transform digital publishing and add value. In summer 2012, Obvious Corporation began testing an online publishing tool called Medium (http://medium.com). Medium promises to organize blog posts, images, tweets, and more into collections defined by a theme and template (Evangelista 2012, D6). Medium's approach—a form of digital publishing influenced by social media—also shares ideological roots in collection development and library-based community outreach practices. Branch Media, another startup, defines its Branch service as a means of "turning monologues [e.g., blogging] into dialogues," making digital publishing a communal experience (http://branch.com).

TWO CASE STUDIES FROM THE UNIVERSITY OF CALIFORNIA-BERKELEY

The following case studies outline how two special collections libraries at the University of California-Berkeley have employed digital publishing strategies to advance their status. The two collections are associated with advanced research institutes: the Institute of Governmental Studies (IGS) and the Institute for Research on Labor and Employment (IRLE). These two collections are "affiliated libraries" of the university, meaning the library directors report not to the university librarian but instead to the director of a research institute, who in turn reports to the vice chancellor of research. These two libraries share a crucial characteristic: They are embedded in their parent organizations and are thus focused on research and community outreach. This has presented some intriguing opportunities over time. In particular, both libraries have become the digital publisher for their parent organization, directly handling digital publishing for faculty members and other user communities.

IGS and IRLE share several attributes. They both support the research activity of faculty members from a number of departments and professional schools, and they both encourage multi-disciplinary research. IGS has 45 faculty affiliates and five program units that handle conferences, fundraising, visiting scholar programs, publications, and event management. IRLE has 85 faculty affiliates, eight program units with strong emphases on community outreach and policy analysis, and a top-ranked scholarly journal, *Industrial*

Relations: *A Journal of Economy and Society.* Both receive funding from the state and University of California and also oversee sponsored research funded by private foundations and government agencies. The populations they serve are diverse and scattered across the UC Berkeley campus.

The libraries offer similar services and share enthusiasm for Web-based outreach. Both manage special collections and provide reference and re-search support to their extended communities, which number about 500 in both instances. They also serve extended patron communities beyond campus that include the public policy sphere, the human resources and labor sphere, and the general community.

Both libraries volunteered to manage Web services for faculty, students, and staff during the Web's infancy, circa 1994–5. At first, Web development was an add-on to existing work, but long-term success in providing Web services eventually resulted in staff increases. IGS employs a digital services librarian, while IRLE has built a Web team consisting of two applications programmers and the library director.

IGS: Matching Research, Analysis, and Current Information

IGS serves an extended community of elected officials and public policy professionals along with its academic community. It provides research support to the Public Policy Institute of California, and thus the library is highly attuned to the world of electoral politics and policy initiatives. IGS launched its Web services by developing and maintaining static informational pages, but it quickly explored a number of interactive services that could operate as information clearinghouses. The following Web projects illustrate IGS's delivery of Web services to its clients and program units.

CALIFORNIA POLICY INBOX

The California Policy Inbox used a blog-style interface to aggregate news about the many initiatives that typically drive California politics. The Inbox offered a one-stop location for rapid updates on policy, legislative, and electoral news and was aimed at meeting both academic and political needs.

CALIFORNIA POLITICAL BLOGS

This blog archive uses the Web Archiving Service developed by the California Digital Library in conjunction with the Library of Congress. Political debate lies at the heart of the blogosphere, and political bloggers have gained outsized clout in the political process. However, this state of affairs could evolve with time; the California Political Blogs archive will keep a permanent record of discourse that future scholars will find useful.

CALIFORNIACHOICES.ORG

CaliforniaChoices is a joint venture including UC Berkeley, UC San Diego, and Next10, a non-partisan education organization. It pools the deep talent and awareness of faculty and affiliated experts in analyzing the movement and dynamics of public policy and aims to provide accessible commentary to all levels of readers (see Figure 1). The IGS Library, long known for publishing incisive non-partisan guides to California ballot initiatives online, was recruited to contribute this content to the CaliforniaChoices site. Library staff designed the layout for site pages devoted to the ballot initiative guides and developed a highly interactive endorsements table that allows users to share their opinions via e-mail or social networking sites.

FIGURE 1 The IGS Library publishes ballot initiative resource guides on the CaliforniaChoices site. (Color figure available online.)

OCLC CONTENTDM

Using OCLC's digital archiving tool, IGS has developed an archive of government e-resources that are found through library catalogs (http://www.oclc.org/contentdm). This service seeks to keep a persistent record of documents that are available online for a limited time, making them accessible to scholars for the long term (see Figure 2). With OCLC's Web harvesting tool, IGS archives specific policy and planning documents from municipal and county government Web sites in California and catalogs them for discoverability through both WorldCat and the CONTENTdm interface.

ESCHOLARSHIP REPOSITORY

The eScholarship Repository is a system-level publishing service adapted by the California Digital Library in conjunction with the Berkeley Electronic
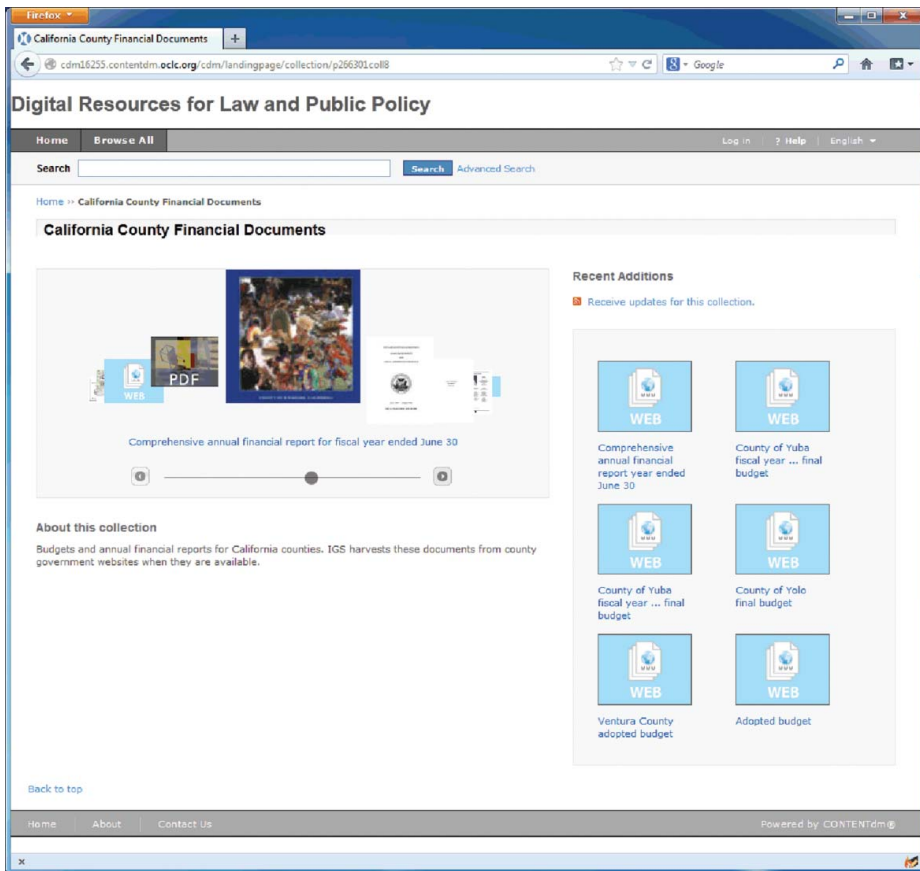

FIGURE 2 Using CONTENTdm, IGS has built several collections of California local government documents, harvested from Web sites. (Color figure available online.)

Press. eScholarship provides a centralized repository that eases the discovery process for faculty publications that are either pre-prints or that were never aimed at peer-reviewed venues.

IRLE: Comprehensive Web Publishing and Program Outreach

As an institute, IRLE has long been concerned with supporting faculty research that has both applied and theoretical applications. This dual approach was strongly influenced by the state of California's early interest in studying labor-management cooperation in the aftermath of World War II. IRLE addressed its research to management groups, labor groups such as unions, and the global community of economists, sociologists, and others who studied the nature of work and the workplace. Its scholarly journal spent most of its 50 years of publishing as either the first or second-ranked journal in the field. IRLE's long-term success has depended upon creating a lively intellectual zone of common ground for the free flow of ideas, despite the often fractious nature of labor relations.

The IRLE Library identified the need to spread IRLE's research output using new media, which began with the digital publication of papers, policy briefs, grant results, and topically driven study of current events. Web development often dovetailed with desktop publishing, which created an impression of the library as the digital publisher for IRLE's faculty and member programs. The library Web team has frequently designed publications for print and digital dissemination and has involved themselves in strategic planning initiatives as a result of Web service delivery. The following highlights illustrate the mission-critical nature of Web outreach at IRLE and how library skills advanced the success of the institute itself.

RESEARCH REPORTS, POLICY BRIEFS, AND PROCEEDINGS

The library Web team determined the most valuable and distinctive content IRLE had to offer was its faculty research and the reports and publications of its program units. From the inception of the IRLE Web, links and architecture emphasized this content and spurred high traffic. In its early years (1995–9), the IRLE Web received the highest traffic of any research unit reporting to the vice chancellor for research. The importance of policy briefs became very clear when the Center for Labor Research and Education published a series of briefs covering "big box" employers, including Walmart. During the 2003–4 academic year, downloads on these briefs exploded; when a new brief was announced and appeared, traffic exceeded 50,000 downloads in one hour and averaged more than 5,000 per week for months. The research gained national attention and was featured on public television. Walmart's legal counsel protested, although in the long term they withdrew their complaint
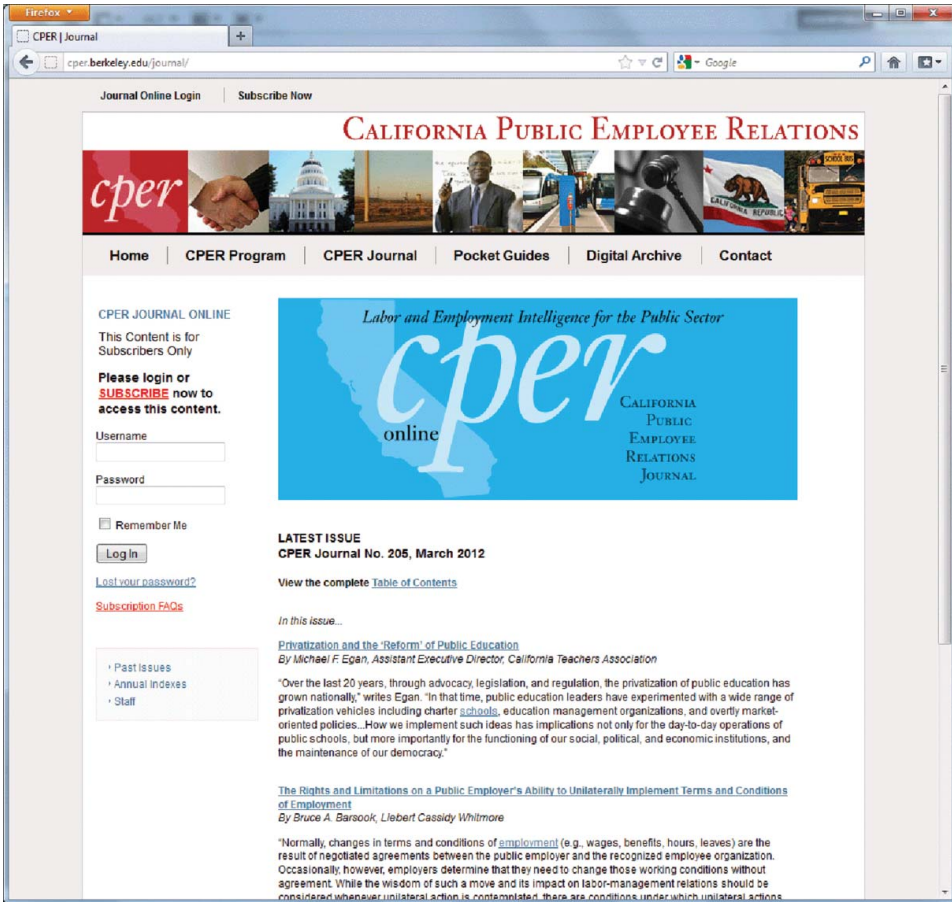
FIGURE 3 CPER Online is built on the WordPress platform, enabling integrated subscription management and online payments. (Color figure available online.)

as the research about the impact of low-wage jobs was substantiated by several other researchers.

LOCAL ONLINE JOURNAL CREATION

California Public Employee Relations is the leading legal magazine about public employees in California and has a loyal following among attorneys, arbitrators, and government employees. In fall 2011, the library Web team created a fully-operational online journal, using the WordPress platform, to take the place of the print version. The journal architecture supports subscription management, e-commerce, and editorial support. The WordPress application resides within the larger IRLE Web site but is visually distinct (see Figure 3).

WORKING PAPERS

Using the eScholarship publishing tool, the library Web team oversees IRLE's five working paper series. The library director manages the series, including calls for papers, follow-ups, and usage reports. A faculty editor reviews the papers for suitability. The principal working paper series sees more than 10,000 monthly downloads.

MASS DIGITIZATION

The IRLE Web team received funding from the University of California Labor and Employment Research Fund to digitize the proceedings and publications of the California Labor Federation, AFL-CIO, and then host the resulting collection in perpetuity on University of California servers. A full century of proceedings, legislative voting records, and other publications are available to all Web users. The federation agreed to send new proceedings and legislative analysis to the library as they appear on a biannual basis (see Figure 4).

WEB ARCHIVING

Using the Web archiving service tools, the library created an archive of the Web sites for the AFL-CIO and Change to Win, a splinter group of unions that left the AFL-CIO. The archive will preserve the Web output of these two organizations, which might reunite at a later date.

CALIFORNIA'S LIVING NEW DEAL

Professor Richard A. Walker and author Gray Brechin developed a strategy to create an online mapping display of all of the artifacts that were created by Franklin D. Roosevelt's New Deal initiative. The library Web team wrote a GPS-driven architecture to allow non-technical staff to enter data, which could then be displayed visually on the Living New Deal Web site using open source GPS tools. The Regents of the University of California copyrighted the architecture, and it has been used as a template by other states and their universities. Once the platform was mature and stabilized, it was sent to the Department of Geography, where it still resides.

E-COMMERCE

The UC Berkeley campus does not offer a single, campus-wide e-commerce solution, so campus departments must develop and maintain their own e-commerce sites. Cloud-based services are making this easier, although the responsibilities associated with e-commerce are substantial. The library Web team selected a commercial product (1ShoppingCart; http://www.
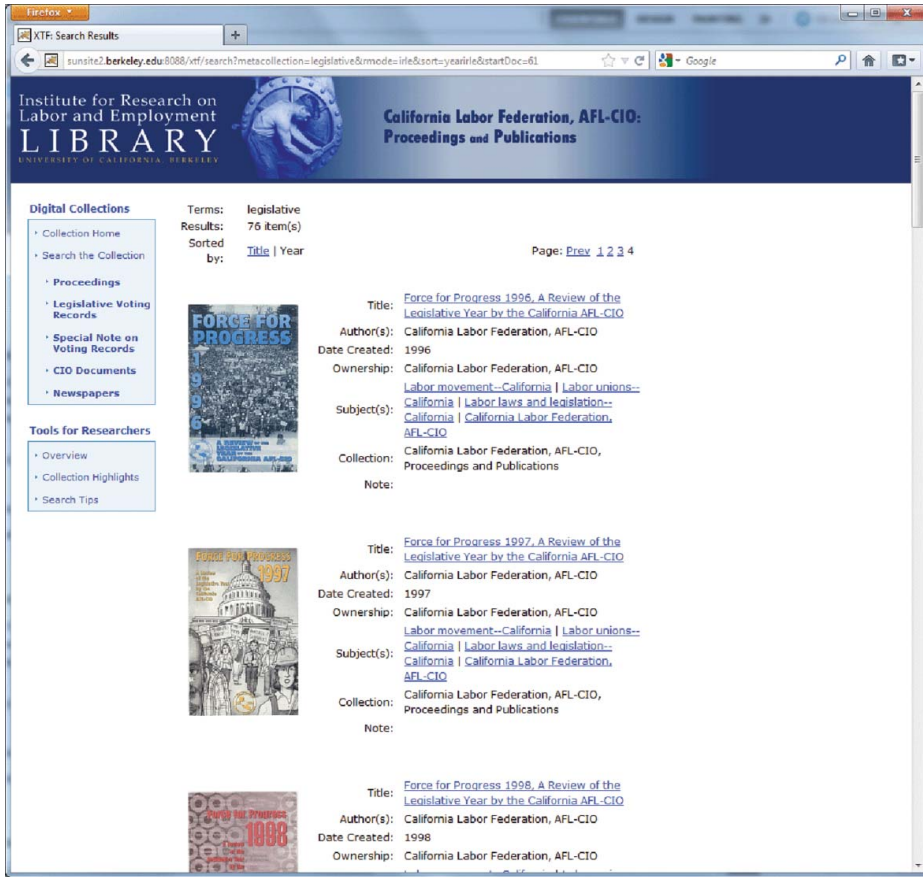
FIGURE 4 The California Labor Federation repository utilizes the Metadata Encoding and Transmission Standard and is fully searchable. (Color figure available online.)

1shoppingcart.com) and developed a PHP program that links the cart to CyberSource, a PCI-compliant credit card handler (http://cybersource.com). The Payment Card Industry data security standard requires that no credit card or identity data can touch a UC server, and the overall system is overseen by the university cashier's office.

WEB-ENABLED REGISTRATION

Prior to the emergence of efficient, cloud-based online registration programs, IRLE staff managed multiple concurrent registration processes with spreadsheets and other desktop programs. Using PHP, the library Web team created a form-and-database application that piped registrations directly into spreadsheets, saving staff a significant amount of time.

EPUB FILE CREATION

IRLE publishes books as well as a wide array of policy briefs and reports. As the ePub open source format becomes more ubiquitous, the team is developing plans for managing locally created e-books, including local e-commerce sales and sales by third parties, such as Amazon.

NATIONAL HEALTH CARE CALCULATOR

The library collaborated with IRLE's Center for Labor Research and Education to develop a National Health Care Calculator (http://laborcenter. berkeley.edu/healthpolicy/calculator). Under the Affordable Care Act, beginning in 2014, many individuals and families will be eligible to receive subsidized coverage in health care exchanges if they are not eligible for Medicare, Medicaid, or the Children's Health Insurance Program, or not offered affordable coverage through their employer. The National Health Care Calculator allows Web users to enter family income, family size, and age of youngest adult to receive estimates of the amount eligible individuals and families will spend on premiums and maximum out-of-pocket costs for an exchange health plan under the law. The Calculator is a mix of algorithms and PHP coding and has attained copyright under the Regents of the University of California. It is being evaluated for acquisition by a number of for-profit health care providers. If acquired, it will generate royalties that would flow to the Regents, IRLE, and the authors of the Calculator and its underlying PHP code (written by library staff).

DISCUSSION

It is important to note that many other libraries—notably public and special libraries—are experimenting with similar approaches to develop digital publishing programs (Hill 2012). These two case studies are distinctive in that they demonstrate how user communities can be effectively leveraged as "clients" and that libraries have the expertise to provide digital publishing services that meet their needs. The two libraries have been flexible in how they support their parent organizations and tailored their strategies to encompass a range of activities beyond the creation of files, Web pages, or e-books. They launched their outreach early in the Web era, and as a result library staff developed reputations as the "go-to" team for publishing solutions. In addition, the case studies illustrate how specific local research interests generate new sources of information, and this in turn creates opportunities to test the idea that digital publishing can be a core competency.

The two libraries have also balanced local activity with already-existing system-level ventures at the University of California. They provide scholars

with additional tools to share scholarship and analyze policy and research projects rapidly, reaching a wide audience. At the local level, digital publishing has strengthened relationships with user communities, solidifying the library as an important contributor to scholarly communications. Local services also help to introduce the faculty to system-level services such as repositories and data curation and management.

The case studies imply that the benefits of digital publishing as a new core competency fall into two principal categories. First, the Web is the public face of the organization and therefore central to every aspect of its work. Managing digital publishing for the faculty, affiliated centers, and programs pushes the library directly into the workflows of its clients. This raises the public profile of the library as a digital publisher and content creator. From this vantage point, library staff can offer organizational advice on how to manage projects, comment on the direction and pace of digital innovation, and act as experts in academic uses for rich media. If successful, taking this role can boost support for library services, particularly with respect to adding technologically savvy staff. Digital publishing also frees center and program staff to focus on their core mission and leverages Web skills so more innovation is possible. The demand for service at IRLE was heavy from the beginning, and as a result, IRLE's program units agreed to help fund a second full-time programmer to meet the demand.

The second benefit is a rise in status. The importance of digital publishing to the institutes' core goals has a halo effect insofar as other library work, such as digital reference and electronic collection development, has increased status in the eyes of the faculty. At IGS, high-level aggregation of data is an indispensable element for conducting research, and the library is the solution lab. At IRLE, oversight of working paper generation, the roll-out of e-commerce, and a variety of publishing projects have reinforced the peer status of the librarians with the faculty. Library staff are centrally involved with the scholarly journal *Industrial Relations*: *A Journal of Economy and Society*, assisting with marketing, editorial planning, and designing. The high traffic on all digital working paper series, which averages about 30,000 per month, has also increased faculty interest in new digital publishing avenues. IRLE's library developed and licensed a full-blown architecture for local history-making about the New Deal, and this gained national attention among historians. This rise in status is not only welcome as a form of recognition, but it can also lay a foundation under library services that can protect them during the cyclical expansions and retractions of budgetary support.

The challenges are associated with workflow patterns and thus are more predictable in their nature, but they must be explicitly understood if digital publishing can indeed become a new core competency. First, it is vital to evaluate all new projects carefully to avoid being overwhelmed with ongoing work. Second, success breeds demand. Non-technical staff may not know how much time goes into managing services such as digital repositories,

electronic collections, Twitter feeds, blog updates, or PHP form management; it is easier for them to categorize these functions as simply "putting them on the Web." Consequently, user education is a constant challenge. Third, it is important to note that the early simplicity of networked information architecture is quickly becoming a thing of the past; the contemporary Web runs on a matrix of several scripting and programming languages, all of which must be monitored and adjusted over time. Given the situation, staff time naturally drifts toward code writing, debugging, and maintenance, and this can conflict with ongoing activities, such as Web site redesigns, content updates, and client contact.

CONCLUSION

As networked information evolves, one can expect increased direct involvement by users in the digital publishing process—as authors, commentators, and as publishers in their own right. This challenges libraries to take on larger technical and teaching roles and to join in collaborative ventures. These two case studies present a strategy to involve the library in digital publishing in ways that extend its overall mission and build relationships. In this respect, the strategy of taking on the publisher role is a response to the rapidly changing conditions by filling a service gap, using widely-available Web technologies.

The move to enter digital publishing is a major policy-level decision for individual libraries as well as for library systems and as such is a serious decision to make. However, following the user means following them into content creation too, so there is a strong case that this new kind of work is relevant and important. As digital convergence continues to change education, scholarship, and work, the library profession must evaluate every opportunity to maintain relevance and be prepared to establish new core competencies that are responsive to the changing times.

Whether digital publishing becomes a core competency or not, librarians will face two strong social and technological trends that will influence how the profession gauges the options. First, the Internet empowers end users—and those who help them. Programming trends favor empowering users directly, with tools such as Twitter, apps, and blogs. However, users still require support services. Librarians can offer support in many ways, and they learn best from users themselves. In an era when anyone can become a digital publisher, those who get it right will gain an advantage. Following users into digital publishing is one way to learn what works and what does not.

Second, quality still matters. Although the Internet is certainly an empowering force, it spins out a vast variety of tools, ideas, and applications. There is much attention going to publishing solutions, including

the ePub open access book publishing platform, new forms of "micropublishing," and new ways of building collections of material, as seen in Medium. Library-based initiatives that take advantage of the digital publishing marketplace can make significant contributions to the future direction of Web authoring and may be a positive influence on the issue of preserving quality.

Digital publishing is a form of following the user in new directions. It is a substantial new mandate, requiring thought and investment of scarce time and resources. As a core competency, it organizes all the activities of content creation under one category, which in itself brings clarity and reveals new potential for library services. Beyond the profession, the idea of what publishing is and what it can become is being widely explored; fortunately, the unsettled environment favors bold action and initiative—two qualities that the information professions have embraced.

REFERENCES

Adema, Janeke, and Birgit Schmidt. 2010. "From Service Providers to Content Producers: New Opportunities for Libraries in Collaborative Open Access Book Publishing." *New Review of Academic Librarianship* 16 (S1):28–43. doi:10.1080/13614533.2010.509542.

Battelle, John. 2010. "Toward A New Understanding of Publishing," Part 1. Accessed January 21, 2013. http://signal.federatedmedia.net/toward-a-new-understanding-of-publishing-part-1/.

Brown, Laura, Rebecca Griffiths, and Matthew Rascoff. 2007. "Ithaka Report: University Publishing In a Digital Age." http://www.sr.ithaka.org/research-publications/university-publishing-digital-age.

Burich, Nancy J., Anne Marie Casey, Frances A. Devlin, and Lana Ivanitskaya. 2006. "Project Management and Institutional Collaboration in Libraries." *Technical Services Quarterly* 24 (1):17–36. doi:10.1300/J124v24n01_02.

Crawford, Walt. 2012. "Micropublishing." *Online* 36 (1):39–42.

Delserone, Leslie, Julia Kelly, and Jody Kempf. 2010. "Connecting Researchers with Funding Opportunities: A Joint Effort of the Libraries and the University Research Office." *Collaborative Librarianship* 2 (1):33–7.

Detlor, Brian, and Vivian Lewis. 2006. "Academic Library Web Sites: Current Practice and Future Directions." *The Journal of Academic Librarianship* 32 (3):251–8. doi:10.1016/j.acalib.2006.02.007.

Enis, Matt. 2012. "To Remain Relevant, Libraries Should Help Patrons Create." *The Shifted Librarian*, May 25. http://www.thedigitalshift.com/2012/05/ux/to-remain-relevant-libraries-should-help-patrons-create/.

Evangelista, Benny. 2012. "A Boost for Collaboration: Medium, from Twitter Backers, Tries to Improve Online Publishing." *San Francisco Chronicle*, August 16.

Fagan, Jody Condit, and Jennifer A. Keach. 2011. "Managing Web Projects in Academic Libraries." *Library Leadership & Management* 25 (3):1–23. http://journals.tdl.org/llm/article/view/2159/2951.

Fister, B. 2001. "Trade Publishing: A Report from the Front." *portal: Libraries and the Academy* 1 (4):509–23. doi:10.1353/pla.2001.0068.

Frumkin, Jeremy, and Terry Reese. 2011. "Provision Recognition: Increasing Awareness of the Library's Value in Delivering Electronic Information Resources." *Journal of Library Administration* 51 (7–8):810–9. doi:10.1080/01930826.2011.601277.

Gilman, Isaac, and Marita Kunkel. 2010. "From Passive to Pervasive: Changing Perceptions of the Library's Role through Intra-Campus Partnerships." *Collaborative Librarianship* 2 (1):22–32.

Hahn, Karla. 2008. *Research Library Publishing Services: New Options for University Publishing*. Washington, DC: Association of Research Libraries. http://www.arl.org/bm~doc/research-library-publishing-services.pdf.

Hawkins, Kevin. 2004. "The Library as Publisher: Creating Scholarly Resources." Presentation to visitors from Tianjin, People's Republic of China, April 22. http://hdl.handle.net/2027.42/85168.

Hill, Nate. 2012. "A Two Part Plan to Make Your Library a Local Publisher." *The PLA Blog: Official Blog of the Public Library Association*, February 4. http://plablog.org/2012/02/a-two-part-plan-to-make-your-library-a-local-publisher.html.

Hope, Charity B., and Christina A. Peterson. 2002. "The Sum Is Greater Than the Parts." *Journal of Library Administration* 36 (1–2):21–38. doi:10.1300/J111v36n01_03.

Howard, Jennifer. 2013. "For New Ideas in Scholarly Publishing, Look to the Library." *The Chronicle of Higher Education*, February 4. http://chronicle.com/article/Hot-Off-the-Library-Press/136973/.

Jöttkandt, Sigi, John Willinksy, and Shana Kimball. 2009. "The Role of Libraries in Emerging Models of Scholarly Communications." Paper presented at LIANZA, Christchurch, New Zealand, October 13. http://openhumanitiespress.org/Jottkandt_13-10-09_LIANZA.pdf.

Koerber, Jennifer. 2012. "The Makings of Maker Spaces, Part 2: Espress Yourself." *The Shifted Librarian*, October 1. http://www.thedigitalshift.com/2012/10/public-services/the-makings-of-maker-spaces-part-2-espress-yourself/.

Liu, Shu. 2008. "Engaging Users: The Future of Academic Library Web Sites." *College & Research Libraries* 69 (1):6–27. http://crl.acrl.org/content/69/1/6.full.pdf+html.

Mitchell, Erik. 2011. "The Organizational Role of Web Services." *Journal of Web Librarianship* 5 (2):146–51. doi:10.1080/19322909.2011.572448.

Motin, Susan Hubbs, and Pamela M. Salela. 2006. "A Liaison Model for Integrating the Library, IT, Web, and Marketing Teams." *Technical Services Quarterly* 24 (1):1–15. doi:10.1300/J124v24n01_01.

Oakleaf, Megan. 2010. *Value of Academic Libraries: A Comprehensive Research Review and Report*. Chicago: Association of College and Research Libraries. http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/value/val_report.pdf.

O'Brien, Linda. 2010. "The Changing Scholarly Information Landscape: Reinventing Information Services to Increase Research Impact." *ELPUB2010—Conference on Electronic Publishing*, Helsinki. http://hdl.handle.net/10072/32050.

Reynolds, Rob. 2011. *"International Digital Publishing Forum*, November 2011 Elec-
    tion: Candidate Statement." Accessed January 24, 2013. http://idpf.org/board-
    elections-2011–11/candidate-statements/reynolds.
Riley-Huff, Debra A. 2009. "Web Services As Public Services: Are We Supporting Our
    Busiest Service Point?" *Journal of Academic Librarianship* 35 (1):65–74.
Rosemont College. 2010. "Graduate Publishing Program." Accessed October 9, 2012.
    http://www.rosemont.edu/gps2/graduate/academics/publishing/study.php.
Schwartz, Meredith. 2012. "Auto-Graphics Adds Self-Publishing Tool to Li-
    brary Software." *The Digital Shift*, October 5. http://www.thedigitalshift.com/
    2012/10/software/auto-graphics-adds-self-publishing-tool-to-library-software/.
Steele, Colin. 2008. "Scholarly Monograph Publishing in the 21st Century: The Future
    More Than Ever Should Be an Open Book." *Journal of Electronic Publishing* 11
    (2). doi:10.3998/3336451.0011.201.
Stoffle, Carla J., and Cheryl Cuillier. 2010. "From Surviving to Thriving." *Journal of
    Library Administration* 51 (1):130–55. doi:10.1080/01930826.2011.531645.
Tomlinson, Shawn M. 2013. "The Definition of Digital Publishing." Accessed January
    23, 2013. http://www.ehow.com/about_5101062_definition-digital-publishing.
    html.
Walters, Tyler, and Katherine Skinner. 2011. *New Roles for New Times: Digital Cu-
    ration for Preservation*. Washington, DC: Association of Research Libraries.
    http://www.arl.org/bm~doc/nrnt_digital_curation17mar11.pdf.
Warren, John W. 2010. "The Progression of Digital Publishing: Innovation and the E-
    volution of E-books." *The International Journal of the Book* 7 (4):37–53. http://
    www.rand.org/content/dam/rand/pubs/reprints/2010/RAND_RP1411.pdf.
Welch, Jeanie M. 2005. "The Electronic Welcome Mat: The Academic Library Web
    Site as a Marketing and Public Relations Tool." *The Journal of Academic Librar-
    ianship* 31 (3):225–8.
Wikipedia. 2013. "Electronic Publishing." Accessed January 23, 2013. http://en.
    wikipedia.org/wiki/Electronic_publishing.