

Managing web projects in academic libraries

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Abstract

Today's academic library web sites are mission-critical library locations providing access to research content and online services to our students, faculty, and ourselves. Managing these web sites and related projects has grown increasingly complex. The authors conducted a 24-item survey via listserv to gain a better understanding of the current state of web project management in academic libraries today. Responses from 121 managers of web projects were received. The survey results provided quantitative and qualitative information about project managers, project management techniques, and organizational structures used by libraries to manage web projects, the responsibilities of standing web committees, best practices, and remaining challenges. Web project management in libraries continues to be informally defined and has not yet found a consistent home within organizational charts. The function of project management is still often only one part of a hybrid job and is not often included in job descriptions. Some project management techniques are used frequently, but the most formal practices are not. Web teams and workgroups vary widely among libraries and the respondents described challenges associated with questions of authority, lack of technical expertise, individual agendas, and heavy workload. While the survey data is not statistically generalizable to the larger population of academic libraries, it suggests some best practices and points to the need for research into specific aspects of library web project management, most notably in the area of web team effectiveness.

Introduction

Academic libraries were quick to respond to the advent of the World Wide Web. Librarians learned HTML and created online pathfinders, library catalog companies developed web interfaces, and systems librarians installed web servers. But while freelance web development companies and the commercial sector quickly moved from trial-and-error workflows into more formal project management techniques for web work, libraries have struggled to find the right combinations of staff, committees, and organizational structures to meet the web's growing demands. With so much third-party content and proliferating online services, the importance of web project management in the academic library continues to increase. While many institutions have made great strides toward efficient workflows and staffing, best practices for managing web work within academic libraries are only beginning to emerge.

As a discipline, project management is defined as "the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and

expectations from a project.”¹ Books published in the early 2000s by Ashley Friedlein and by Thomas Shelford and Gregory Remillard proposed ways to adapt these strategies for the web.² Although these books provide pointers for libraries, the advice is often more suited to web development firms and the for-profit sector. Library web projects are different, not only because their customers do not buy the offered services and materials, but also because libraries have a large number of internal stakeholders and access to many third-party systems. For these reasons and more, in 2009, Fagan and Keach proposed a library-specific set of strategies for managing web projects in *Web Project Management for Academic Libraries*.³

In order to inform this area of research, the authors conducted a survey of web project managers in academic libraries to investigate the following questions:

1. Who are the web project managers in academic libraries today?
2. What project management techniques are in use?
3. What organizational structures are in use for web projects?
4. What are the responsibilities of standing web committees?

In addition to these questions, the authors attempted to identify best practices, common challenges, and opportunities for future research.

Literature Review

Many articles about web development in libraries describe specific project case studies or general theories about the process. This literature review focuses instead on articles which investigate multiple organizations. It will briefly review project management literature and then turn to the library context. It will include an examination of project management trends in library positions, especially those which are web-related, and investigate organizational placement for web managers and the use of teams in web work.

Many articles in the literature survey project managers, or their supervisors, to identify key skills and processes.⁴ The findings suggest that communication skills are more important than planning, control, and subject knowledge. Surveys of project managers have also found a recurring disconnect between knowledge of project management standards and success. In a three-country survey by Lynn Crawford, knowledge of project management standards was not a requirement to be evaluated as a high-performing project manager.⁵ Other surveys showed only a small number of project management methods, tools, and techniques were used by respondents⁶ or were considered core competencies necessary for good performance.⁷

This informal approach to project management is also reflected in libraries: in 1998, Shirley Chambers and David Perrow surveyed librarians in the United Kingdom and discovered that only three percent of the respondents used formal project management methodologies while twenty-seven percent used specific project management techniques, including schedules, Gantt

charts, and network diagrams.⁸ The authors found no formal studies concerning project management techniques used for web projects within libraries.

Position descriptions and job advertisements also revealed that technology project management in libraries is on the rise. Library catalogs were typically the first web technologies in libraries, and there was an increase in project management activities among catalogers from 1987 through 1997, including developing specifications, selecting new tools, and implementing catalog products.⁹ Jane Kinkus analyzed library job advertisements and found an increase from 4.1% to 11.2% in jobs “explicitly requiring” project management skills from 1993 to 2003-2004.¹⁰ Youngok Choi and Edie Rasmussen analyzed 363 job advertisements for positions that included the word “digital” from 1999 to 2007. They found an even higher percentage (37.93%) of positions focused on projects.¹¹ Janie Mathews and Harold Pardue analyzed librarian positions advertised in 2008 and noted the occurrence of both web development (38%) and project management skills (29.5%).¹² In 2005, Mark Winston and Tara Hoffman published an analysis of library school curricula for evidence of project management instruction.¹³ Contrary to the articulated need for project management skills in the profession, they found project management courses were offered at only 3.7% of the 56 programs examined. These studies suggest that project management is often required for library jobs of all types, even though it is not being taught in library science programs.

The structure and distribution of web work and web project management in library organizations was examined in several studies in the late 2000s. Maira Bundza, Patricia Vander Meer, and Maria Perez-Stable surveyed web services and public services librarians and found library web site management to be distributed in the organization.¹⁴ Arthur Hendricks surveyed library technology listservs to identify how academic libraries manage web site policies and found that most respondents had the title of Reference Librarian (21.7%), followed by Web Services Librarian (18.3%). Most commonly, respondents worked within Systems (36%) and Public Services (23.3%) departments.¹⁵ Jason Kneip found that webmaster positions at medium-sized libraries are most often located within a systems, automation, or technical services unit (30%) or within reference or instruction (22%).¹⁶ In her survey of “library web designers,” Ruth Sara Connell found responsibility for the web site was often combined with other roles.¹⁷ Debra Riley-Huff surveyed the lead web person at 124 doctoral university libraries; for 41% of the respondents, the lead web person was organizationally within an information technology or systems unit, 15% in reference, and 13% in digital initiatives.¹⁸

In addition to working in various units, library webmaster duties may or may not be formally documented. Mary Taylor’s 2000 survey of library webmasters at ARL libraries found that only a quarter of the respondents had webmaster duties included in their job description, and almost 60 percent spent fifteen or fewer hours a week on web-related duties.¹⁹ Kneip’s medium-sized library webmaster respondents commonly combined web work with other responsibilities and spent twenty hours or less on web development.

Several studies have looked at the use of web teams and web committees. In a 2001 survey of ARL member libraries by Kate Ragsdale, 82% of the responding libraries reported having web teams or committees.²⁰ Ninety percent of Taylor’s library webmaster respondents preferred

working with a web committee or team; 38% mentioned one advantage of teams was their contribution of ideas, input, and feedback, although 34% cited a difficulty in achieving consensus. Web advisory committees were used by 63.8% of Hendricks' respondents, with 32.4% of those committees having total control over the web site. In her survey of library web designers, Connell found web teams were used by 49% of the respondents. Smaller teams, where members were most often selected by their interest in web design, were the norm. Riley-Huff found that 74% of her respondents had formal web committees related to decisions, policy, and design.

The above studies show an increased interest in project management in libraries. Web project management and web work remain distributed in the organization and may or may not be defined in job descriptions. Web committees are in use in some libraries but not all, and have differing roles. Overall, the major trend in the research has been variety rather than consistency of practice.

The authors sought similar information about web project management within libraries and also wanted to explore new areas of investigation. Job descriptions and organizational locations of web-related staff have been studied several times, but web work has changed since the earliest studies. Project management techniques for the library web have not yet been studied. The researchers also wanted to investigate organizational structures for managing web projects and web groups' responsibilities in greater depth than was offered by previous studies.

Methodology

A 24-item survey was approved by James Madison University's Institutional Review Board and distributed to several library listservs (code4lib, usability4lib, web4lib, and lita-l) on June 9, 2008, with a response deadline of June 30, 2008. We invited those who "ever tried to coordinate a web-related project" to fill out the survey (with the intent that project management may not be a formal part of job descriptions) and asked people to pass the announcement on to others at their library who managed web-related projects. We defined a "web project" as taking more than 2 weeks and/or involving more than 3 people.

The survey was anonymous, but respondents could choose to enter their e-mail address at the end to receive aggregate survey results. The survey used Qualtrics software (<http://qualtrics.com>) and survey items are listed in the appendix.

The survey received 121 responses by the deadline, with 81 fully answered surveys. One of the questions, "What is /are the names of your standing web committees?" allowed respondents to enter up to four responses. They were then asked three follow-up questions about each of their standing web committees. Because not all respondents answered all questions and some responses were optional, the number of responses is included for each question.

Limitations

In retrospect, the survey methodology had some limitations. The intent was to survey people who managed web projects in their libraries rather than limiting the pool to just webmasters or web-specific titles. For this reason, the survey invitation was distributed to several listservs having such people as members. Although the number of people subscribed to the listserv was obtained, no further information was available about the potential pool of respondents. It is unknown how many listserv members were librarians or library staff members, or had ever worked in a library. Also, people who answer surveys sent to listservs may not represent a “typical” web project manager.

The survey was quite long; the 24 items had multiple parts. This may be one reason why many respondents dropped out of the survey after the first few questions.

Because of these limitations, this study’s results do not provide generalizable conclusions about web project management in academic libraries. However, they do provide interesting observations across a large number of web project management experiences at different sizes of academic libraries. Much can be learned from a critical mass of shared experiences, even if findings are not drawn from a truly representative sample. In addition to suggesting some theories, the results form a base from which additional questions can be asked and additional research can be performed.

Results

The survey received responses from libraries of all sizes—from fewer than twenty employees to more than 150 employees. In addition to basic demographic questions, the survey asked ten questions related to web project management in libraries and six questions related to web teams. Topics regarding web project managers included academic degrees, level of activity in managing web projects, placement within the organization, job responsibilities, important traits for library web project management, and the use of project management techniques. Regarding web teams, the survey asked about the types of web-related groups, how work is assigned to groups, group names, what makes groups effective, group composition, and group responsibilities.

Web project managers in academic libraries

Eighty-four percent of the 109 respondents who answered the question about academic degrees held an “MLS, MLIS, or similar degree”; 25% said they also had an additional master’s degree. Only one respondent held a PhD.

Respondents were asked how many people in their organizations led web projects. Sixty-four percent of 121 respondents said that 2-5 different people in their organization led web projects; 22% said more than 5 people in their organization led web projects. Only 14% said only one person led web projects. When asked about their level of web project management, 44% of the 121 respondents managed “all or most” of their institution’s web projects in the last two years. A

slightly larger number of respondents (47%) said they managed “some” of their institution’s web projects, and nine percent of respondents said they managed “few” of their institution’s web projects.

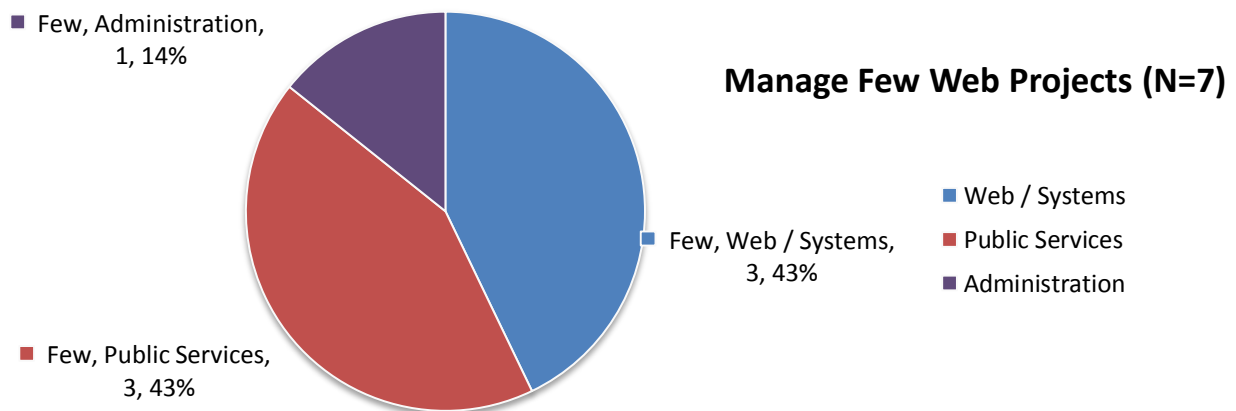
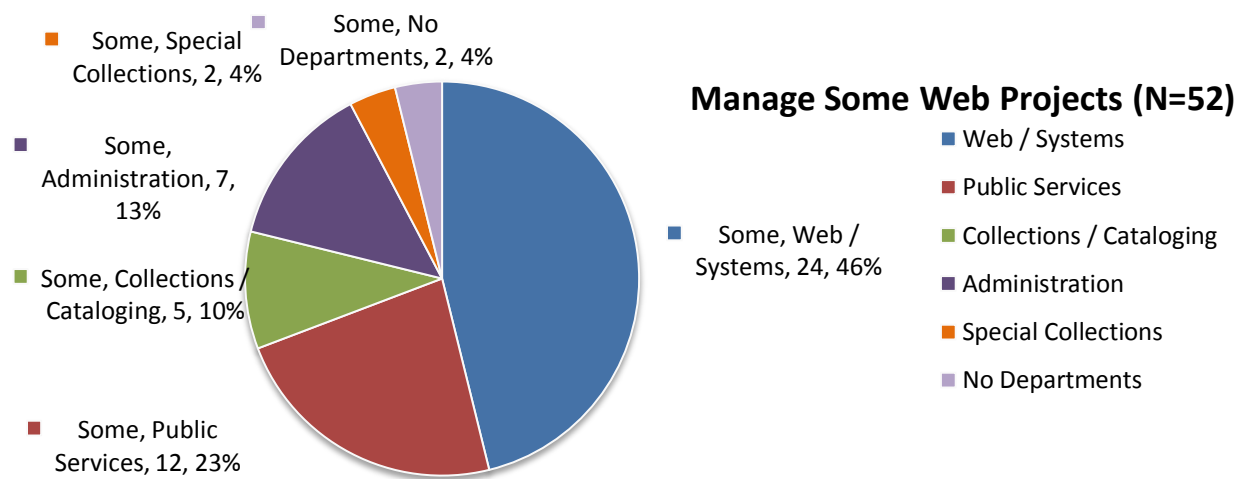
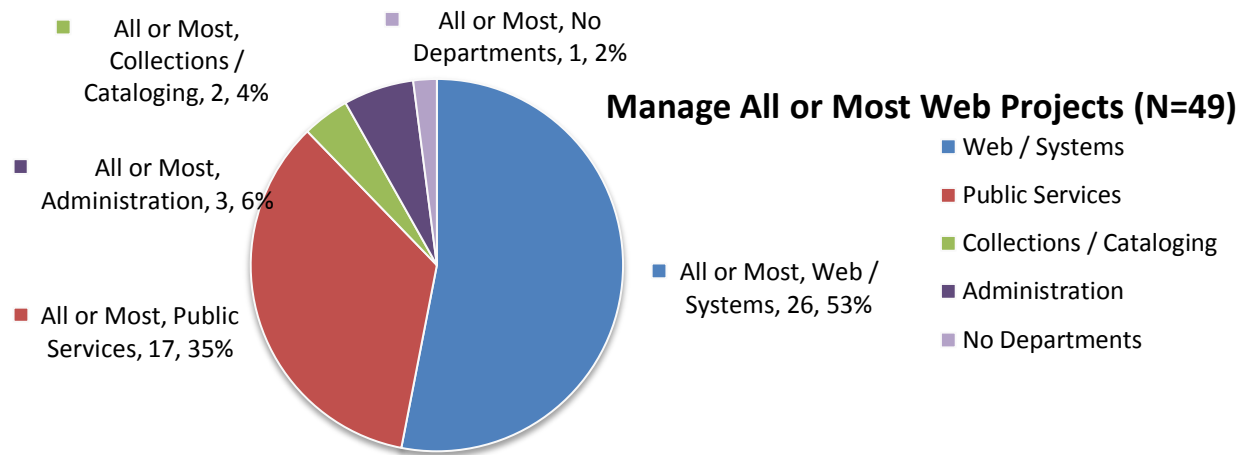
Even within the group who managed “all or most” web projects (n=53), job titles varied greatly. Although the title “Web Services Librarian” was shared by five respondents, 22 of the 29 titles were listed by only one respondent (see Figure 1). Of those who managed “some” web projects, job titles were even more diverse and included library directors and administrators; only three of these job titles related directly to the web.

Figure 1. Job titles for those responsible for all or most web projects (n=53)

Assistant Reference Librarian	Systems Librarian (2)
Automated Services Librarian	Web Applications Manager
Digital Initiatives Librarian	Web Content Reference Librarian
Digital Services Librarian (3)	Web Coordinator (2)
Electronic Resources Librarian	Web Developer and Graphics
Electronic Services Librarian	Web Development Coordinator
Head of Information & Access Services	Web Development Librarian (3)
Head of Libraries Web Services	Web Librarian
Head, Collection Management & Technical Services	Web Program Manager
Information Technology Coordinator	Web Services Librarian (5)
Knowledge Management Librarian	Web Services Team Leader
Lead Application Developer	Web Specialist II
Manager of Digital Library Services & Information Systems	Web Support Librarian
Reference Librarian	Web/Reference Librarian (2)
	Webmaster (2)

The 108 respondents who named their department or unit within their organization highlighted that libraries, as a whole, have not settled on one organizational location for web projects (Figure 2). Of those who said they managed “all or most” of their institution’s web projects (n=49), the most commonly reported departments were variants of information technology, digital, or systems. Departments related to public services or reference were the next most common responses. For those who gave their departmental location and managed “some” of their library’s web projects (n=52), the top categories were the same, but there were more people in administration than among those who managed “all or most” web projects.

Figure 2. Departments where web project managers work



The survey also asked respondents to list their top 3 to 5 official job responsibilities (n=84). To assist with analysis, the 84 responses were grouped in broad categories by the researchers (see Figure 3). Responses for the “all or most” group were proportionally similar to the entire group. Responses in the area of web development, maintenance, and design were most frequently listed. The second most common type of responses were both non-web-related responsibilities and web project management responsibilities. About a third of respondents to this question mentioned responsibilities in the next two groups, “responsible for library web site / primary contact” and “vision/oversight related to web / systems/ IT.” The rest of the responsibilities were shared by less than one third of respondents.

Figure 3. Job responsibilities of web project managers

Job responsibility	All respondents (N=84)
Web development, maintenance, design, apps	44
Non-web related	33
Project management / team leadership(i.e. lead web team)/ coordinate projects	33
Responsible for library web site / primary contact / "manage the web site"	30
Vision/oversight related to web / systems/ IT	28
Electronic resources (access, licensing)	19
ILS / CMS / other library systems	18
Server administration / maintenance / database design	18
Supervise/manage people (in unit)	16
Support others' web / training	13
Other Web	12

The survey also asked respondents how much of their time they spent managing web projects. Of the 87 respondents to this question, almost half spent less than 25% of their time managing web projects, while only seven respondents spent more than 75% of their time doing so. Of those who managed “all or most” of their institution’s web projects (n=41), 27% spent 0-24% of

their time managing web projects, 34% spent 25-49%, 24% spent 50-74%, and 10% spent 75-100%.

Respondents were asked to list “the top 3 to 5 personal characteristics, traits, or skills that make for an ‘above average’ web project manager” in an open-ended format. The 82 responses were coded into broad categories to facilitate analysis. The top three categories were general communication skills (68.3%), organizational and time management skills (61%), and technical and/or design knowledge (49%). Those mentioning communication often specified the need to be able to communicate technical concepts to non-technical staff. The next four most-mentioned responses were in the categories of flexibility, open-mindedness, determination or drive, and diplomacy or consensus building. The category of diplomacy or consensus building, which relates to communication, was coded separately since respondents often specified it in addition to general communication; diplomacy or consensus building was mentioned by 21% of respondents. The respondents mentioning technical or design knowledge sometimes cited knowledge of a specific technique, such as code, CSS, or database design, while others cited having sufficient understanding of technology to plan work or make good decisions. The responses about user-centeredness (19%) talked about knowledge of users as well as a passion for users.

Use of Project Management Techniques

The survey asked questions about how respondents accomplished web projects. Respondents were given a list of sixteen project management techniques and asked to indicate how frequently they used each one for their own web projects on a scale of frequently, sometimes, rarely, never, and not sure. Because each technique was technically an individual question, the number of responses for each technique ranged from 78 to 80 (i.e. up to two respondents provided no answer for a given technique). The order of activities used in the survey is seen in Figure 4 along with the response rate for each activity.

Figure 4. Frequency of project management activities

Question	frequently	sometimes	rarely	never	not sure
writing a statement of scope or statement of work (n=80)	24	38	11	7	0
identifying a project sponsor (n=79)	23	17	16	19	4
budgeting for outsourcing, hardware and software costs (n=80)	12	21	23	21	3
budgeting for in-house staff time (n=78)	20	18	20	19	1
documenting project requirements (n=79)	46	26	5	2	0

documenting project specifications (n=78)	40	31	5	2	0
computing return on investment/analyzing cost-benefit (n=79)	3	12	32	31	1
creating a work breakdown structure (n=79)	30	23	17	8	1
identifying milestones (n=79)	39	27	10	3	0
identifying a critical path (n=79)	13	24	13	22	7
creating a PERT chart (n=78)	1	10	13	48	6
creating a Gantt Chart or schedule (n=79)	11	21	11	34	2
requiring change request forms (n=78)	7	15	19	35	2
writing a software quality assurance test plan (n=78)	3	10	29	33	3
submitting project status reports (n=79)	34	29	8	7	1
archiving documents for future project teams (n=79)	39	28	8	4	0

Documenting project requirements and documenting project specifications were both marked as used “sometimes” or “frequently” by 91% of all respondents. More than 50% of respondents also marked the following as used “sometimes” or “frequently”: archiving documents for future project teams, identifying milestones, submitting project status reports, writing a statement of scope or statement of work, creating a work breakdown structure, and identifying a project sponsor. All other activities were used either sometimes or frequently by 49% or fewer of respondents.

The activities used “rarely” or “never” by 50% or more of respondents—or in other words, used by the fewest respondents—were computing return on investment/analyzing cost-benefit, writing a software quality assurance test plan, creating a PERT chart, requiring change request forms, creating a Gantt chart or schedule, and budgeting for outsourcing, hardware, software. Responses related to budgeting for in-house staff time were in almost-equal proportions: about as many did this “frequently” or “sometimes” as “rarely” or “never.”

Seventeen people responded to the opportunity to comment on this question. The most commonly shared idea, mentioned by seven of the respondents, was that libraries need to be flexible in the level of formality of project management in order to accommodate the size of staff, the size of the project, and the tolerance of people in the organization. Many respondents mentioned that they currently used only informal methods, and some added that they would like to use some type of project management technique more often. Three respondents mentioned

that project management software is not important. Two highlighted that others in the library may not understand or support the practices. One individual added that hybrid jobs can cause problems: “I am a developer, and I manage my own projects, which is a bad combination of duties.”

Web project management organizational structures

The survey also asked if the library had a department dedicated to web projects, if the library relied on one or more committees, or if the library used a combination of these work structures. When asked “what types of web project management groups does your library use,” 79 participants responded. The majority of respondents (76%) indicated they used temporary web project teams formed on a project-by-project basis. Standing committees were used by 59% of the respondents, and organizational units or departments were used by 46% of the respondents. While the majority of the respondents used temporary project teams, they did so in different combinations with other groups (see Figure 5).

Figure 5. Diagram of web teams, committees, and departments (n=79)

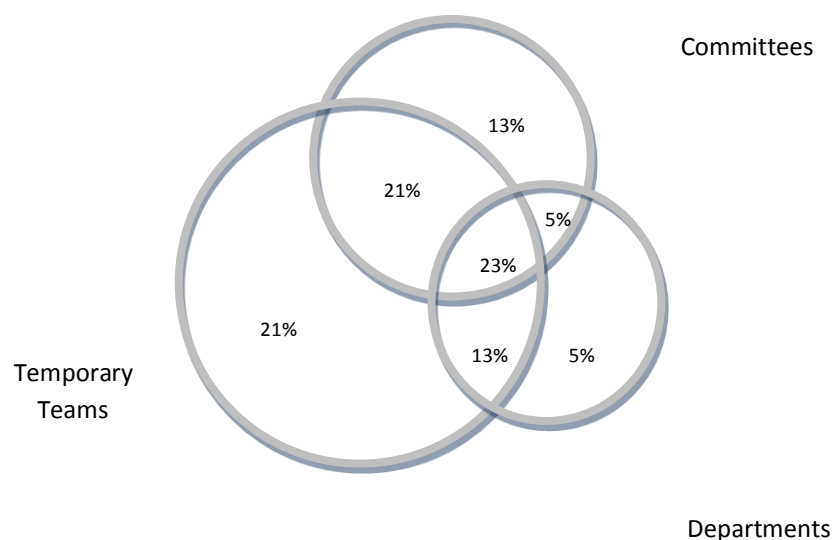


Figure not to scale

Sixty-six respondents answered an open-ended question about how their library determines which group handles which projects. Thirty-two percent of these 66 respondents indicated there was primarily one group or person that handled most web projects, therefore no decision between groups was needed. Twenty-three percent indicated the decision to start a project, the

selection of a project manager, and the selection of a work group was done by upper level library administrators. Seventeen percent indicated that one primary web or technology department/unit handled web projects, while fifteen respondents indicated they had a web committee to either prioritize or staff projects. Demonstrating the difficulty of comparisons across libraries, five respondents mentioned web teams and four respondents mentioned web work groups; the responses to these questions did not clearly indicate whether the teams and groups were units or committees.

Although not specifically asked to provide this information, the same number of respondents (n=66) also contributed details about how groups were assigned to a project and how members were selected for the group. Eighteen percent of these respondents mentioned skills as a determining factor for membership on a project group or for assigning an existing group to a project. Almost as many indicated that those working on a web project were selected because they were stakeholders or had an interest. Eleven percent of these respondents indicated that projects were assigned to individuals or groups based on the size of the project or perceived impact.

Towards the end of the survey, the respondents were asked “In your opinion, what are the top 3 to 5 factors or variables MOST likely to create challenges in managing a web project at your academic library?”; 65 respondents answered (Figure 6). The top challenges were upper administration’s failure to set clear priorities (or changing priorities) and inadequate staffing. These challenges were followed by the need to build consensus, the difficulty of others’ personalities, technical situation, and staff who lacked the necessary expertise. Fifteen percent specifically mentioned a lack or misunderstanding of project management as a top challenge but did not explain who was responsible (i.e. if this was true of an individual, the organization, or administration).

Figure 6. Challenges to successful project management in the academic library

Challenge	Respondents (n=65)
Shifting/unclear priorities	25
Inadequate staff/budget/resources	25
Consensus/strong opinions/the effort required to get input	18
Personalities/camaraderie/buy-in	17
Specific technical situation	14
Technical staff lack expertise	13

Lack of time	13
Larger organizational environment	11
Project management missing/not understood	10
Poor organizational communication	8
Need user testing	7
Scope creep	6
Domain challenge (e.g. library issues are challenging)	5
Poor management	4
Poor team composition	1

Standing web committees

The group of questions about any web project group was followed by questions focusing on standing committees. The survey specified that the next set of questions were for “standing web committees or similar groups, not organizational departments” and indicated the respondent would have the opportunity to list up to four different committees. The names of the groups given, however, indicated not all responses followed this guidance or that the survey format did not allow the respondents to answer completely. Five committees listed were clearly a single person because a person’s name or position title was given. Four committees were actually multiple groups entered on one line rather than in separate spaces. These responses suggested that the respondent had more than four committees to describe, but the survey format did not allow them to describe that many. One entry clarified that it was actually a department rather than a standing committee. Six committees were listed by name but without any further information about their responsibilities or composition. For the remainder of this section of results, the researchers have removed such responses for a total of 59 committees reported by 40 respondents.

Most of the 40 respondents (68%) reported on one standing committee, while 20% reported on two committees, 8% reported on three committees, and 3% reported on four committees. All 59 given committee names are listed in Figure 7. The most common nomenclatures given were committee (39%), group (25%), and team (20%). The most common name was simply the Web Team (7%); overall, the list shows little standardization. The names given also reveal that respondents reported on narrowly focused committees such as “DSpace,” “OPAC Enhancements,” “Science and Engineering Library Web Team,” as well as the presumably broader “Web Team.”

Figure 7. Names for web groups (respondents=40, committees=59)

AIG (Assessment Integration Group)	Web Advisory Group
Content and Information Committees	Web Committee
Cyber Infrastructure Committee	Web Content Development Group
Digital Programs & Systems	Web Content Working Group
DSpace	Web Core Committee
Emerging Technology Group	Web Development Committee
Infrastructure and Software Development	Web Development Team
Internet Strategy Group (ISG)	Web Executive Board
Library Information Technology Committee	Web Group
Library Web Committee	Web Group (Tech & Librarians)
OPAC Committee	Web Management Group
OPAC Enhancements	Web Operational Management Committee
Organizational departments committees	Web Oversight Committee
Public Access Resources Committee	Web Services Council
Public Interface Group	Web Services Working Group
Reference Librarians Committee	Web Site Implementation Team
Science and Engineering Library Web Team	Web Site Support Team
Software Architecture Working Group	Web Steering Committee
Subject Guide Committee	Web Steering Committee (2)
Systems Committee	Web Team/Website Team/Library Web Team (8)
Technology Team Committee	Web Usability Committee
Usability	Web Visioning Committee
Usability and Assessment Group	WebPoint
User Interface Steering Committee	Website Advisory Board
Web Advisory Committee	

The respondents were asked to indicate if members of the committee included “representatives from throughout your library” (hereafter referred to as “representatives”), “technical and design professionals” (hereafter referred to as “web professionals”), or “other” with a text entry option. The majority of the 59 committees described included representatives (85%) and web professionals (64%), with 56% of them including both representatives and web professionals. Twenty-nine percent of the groups were composed of representatives without web professionals, while only a small number (8%) were web professionals without representatives. Among the “other” text responses, 7% of the groups included administrators and 3% included students.

The respondents were asked to select responsibilities for each committee from a defined list of possible responsibilities. All but one respondent for the committees answered this question, for a total of 58 committees reported upon. Figure 8 shows the range of responsibilities selected. On average, the committees had 6 of the 14 possible responsibilities. One of them had all 14 responsibilities, and four committees had just one of the listed responsibilities.

Figure 8. Scope of standing web committees

Scope of standing web committees	Number
Identifies new projects	47
Sets strategic directions	37
Designs usability tests	37
Prioritizes multiple projects	36
Conducts research & development	36
Approves website content and/or graphics	31
Enforces standards (style, accessibility)	31
Manages individual web projects	28
Web maintenance (broken links, etc.)	26
Writes website content	26
Creates website graphics	19
Final approval for completed projects	18

Programming	17
Teaches colleagues how to publish	13

The 40 respondents who provided information about standing committees were asked to comment on the ways in which each group was effective or not effective. Respondents were not given a definition of effectiveness. Responses about all the listed groups were compiled, providing comments about 53 different groups, then coded using an informal grounded theory technique. The most commonly mentioned characteristic for effective groups was having a blend of content and technical experts from various library departments, which was mentioned for 20 groups. Active participation by members was mentioned for nine groups; small size was mentioned for seven groups; having technical knowledge was mentioned for five groups; and “gathering information” was mentioned for four groups. Other characteristics of effective groups mentioned only a few times included focused agendas, regular meetings, effective chairs, authority to make changes, having a budget, and having the group’s responsibility included as part of members’ job descriptions.

The most common reason given for ineffective groups was administrator interference and/or lack of authority, mentioned for seven groups. A lack of technical expertise was mentioned for five groups. Having team members who relied too heavily (or exclusively) on their own opinion or did not have an open mind to alternative viewpoints was mentioned for four groups, as was constraints on team members’ time and workload. Other characteristics of ineffective groups included large size, too broad or too narrow of a scope for the group, not assigning tasks to team members, getting caught up in details, giving up too easily when others object, organizational conflict with other committees, meeting infrequently, and ineffective leadership.

Discussion

The researchers were interested in identifying best practices for web project management in academic libraries. While some interesting trends were discovered, one of the most significant overall findings was that there was no one common, successful combination of positions, organizational structures, team definitions, and project management practices. Libraries were very inconsistent about how positions were defined, what types of web committees were used, and how projects were managed, making identification of trends across the survey responses difficult. Part of the reason for this is the diversity in library sizes, structures, and larger institutional missions. Another reason is the relatively recent emergence of web projects in libraries. While areas such as cataloging and reference have undergone dramatic changes due to the web, they also have years of tradition from which to learn, longstanding professional groups, and a bevy of standards for practice. Organizations such as LITA and listservs such as lib4web have been helpful for gathering web managers together, and the number of conference events and publications related to web project management in libraries is increasing, but this

area is still very much in development. Finally, web project management in libraries has grown organically, out of a “let’s see what works” tradition. This enabled libraries to respond to the demands of the web more quickly. However, this approach to organizing work does not ensure web project management success. Now that libraries have experience, they should learn about standards and practices from the project management profession and modify them to become best practices for web project management within libraries. In this section, the authors review survey results and suggest some best practices based on our own readings and experience.

This survey supports existing literature about the myriad ways web project management fits into someone’s job and into a library organization. Based on this survey’s results, web projects in academic libraries are often managed by the same individuals, but they hold numerous types of positions in a wide variety of library departments. Information technology and systems-related departments predominate, but many people work in public services or administration. Even people who claim to manage “all” or “most” of their library’s web projects have plenty of job responsibilities that are not web-project-related, and in this group, project management is likely not to be listed as a job responsibility—only 31% of those who managed “all” or “most” of their institution’s web projects include it in their job descriptions. Yet, they spend an average of 36% of their time on management activities such as project planning, communicating, and implementing. In fact, of all respondents, only 39% have project management included in their job descriptions. In addition, the group that manage “all or most” projects also frequently engage in web development activities, are responsible for the library web site and support or train others in web-related tasks. It is somewhat disturbing to think such people are doing so without having this in their job descriptions. This suggests project management came about not by intention, but as a result of their other web roles. These findings highlight a need for libraries to review job descriptions where project management duties may have become a regular part of the job. Libraries also need to review job descriptions for those who engage in web development activities to be sure these duties are explicitly stated. In addition to ensuring an accurate description of the job, this ensures individuals have time, official authority, and appropriate skills to engage in these mission-critical activities. In some cases, libraries may need to create new position descriptions to support web project management. While most libraries struggle to add new positions, there may be opportunities to redefine an existing job when someone retires or is interested in exploring a new area of expertise.

When looking at the characteristics, traits, or skills respondents listed as most important, the importance of communication becomes obvious as one of the central tasks of web project management in libraries. This emphasis on communication was also found in numerous project management studies.²¹ The second most important category was organization or time management of projects. Technical knowledge was still important, but the remaining qualities listed by respondents had very little to do with web technologies themselves. When compared with the total pool, responses from those who manage “all or most” of their institution’s web projects were quite similar. The latter group deemed the following traits to be more important than the total pool: technical knowledge, diplomacy / consensus building, and general leadership abilities. The total pool was more likely to list determination / drive as an important trait. This survey supported other studies’ findings that jobs involving web project management can exist in many parts of an organization.²² At some universities, the human resources

department may offer workshops in topics such as organizational communication, working with different behavioral styles, active listening, and time management. Although these may seem unrelated to web project management, our survey suggests these are critical skills.

In larger libraries, the project manager might be the person who has authority to expend resources on a given project. In smaller libraries, the project manager could easily be an administrator, because of the shortage of specialized leaders. This finding suggests a need to educate many types of librarians in project management techniques, not just those in web-related roles. The eleven respondents who said they managed “few” of their library’s web projects are intriguing: why did they step in to lead the one or few projects that they did? This finding points to the need for professional resources to support ad hoc web project management: preconferences, articles, and listservs could all support someone who is managing the occasional web project.

Respondents were asked to comment on the ways in which each standing committee was effective or not effective; they were not given a definition of effectiveness. Based on our results, libraries with standing web committees would be advised to keep groups small, have both technical and content experts on the team, and identify members from across the organization who are willing and able to play an active role on the group. The members should bring specific knowledge of technology, design, users, content, or institutional goals. Interestingly, the groups composed only of unit representatives received about the same number of positive comments (48%) as those composed of both representatives and technical and design professionals (42%), suggesting that these groups can be equally effective. However, for six groups, the lack of technical expertise was listed as a reason for ineffectiveness. Among the challenges of standing web committees were problems of authority and resources: the group may have great ideas, but no resources or authority to implement them. The ideal group also has an effective leader eager to help the group look beyond their individual agendas and solicit input from all stakeholders. Problems mentioned included no staff to work on projects, no budget, needed approvals before proceeding with projects, and the inability to enforce standards.

A wide variety of team structures are used across and within academic libraries, with no single structure predominating. Perhaps the most shared quality (among 62% of respondents) is that usually at least two types of groups are used. The lack of consistent responses suggests that any statements relating to web team structure, team assignments, or team responsibilities beginning with “most libraries...” are inaccurate. Libraries would do well to think carefully through the motivations for forming a team, the team’s charge, and what roles and expertise are needed to fulfill the charge. The authors’ experience suggests a best practice is to form work groups to meet specific projects’ needs, rather to rely too heavily on a web advisory committee for all projects. With their growing knowledge of team needs, web project managers should be involved early in discussions of team composition, project resources, and team authority. Web project managers can look ahead at the entire project timeline to determine the demands a project will place on a team, and have discussions with administrators to balance project scope, resources, and time.

The results related to use of formal project management practices in libraries illuminated significant use of specific techniques. The most popular techniques were descriptive in nature: more than 90% of respondents “frequently” or “sometimes” document project requirements and specifications, and more than 80% archive documents for future project teams, identify milestones, and submit project status reports. These findings are encouraging, as these activities support good organizational communication about projects.

Budgeting activities—in terms of both time and money—received the least attention from the respondents. Budgeting for in-house staff time was just as likely to be done “rarely” or “never” as it was “frequently” or “sometimes.” Even respondents who manage “all or most” of their institution’s web projects indicated the lack of attention to budgeting was a pattern. Because staff time is one of a library’s most precious resources, this activity should be done frequently, if not always. Although many respondents budget for in-house staff time, they also talked about the problem of scope creep, which can result in overworked staff. Few respondents required change request forms; using such forms help a project manager to evaluate the impact a proposed change can have on agreed upon timelines, workloads, and features. This survey also found that most do not compute the return on investment or analyze the cost-benefit. Even if done informally, evaluating both the resources needed and the expected benefit is an important step in prioritizing among projects. After a project is completed, comparing estimates with actual staff time used helps to improve future estimates. Project managers should review past projects to diagnose the source of scope creep issues and identify documentation or planning tools to track staff time. Future planning for staff resources should be based on previous experience with the actual number of hours expended on projects.

Among seventeen open-ended comments about project management activities, many respondents mentioned that they currently used only informal methods, and some added that they would like to use some type of project management practice more often. The most commonly offered idea was that libraries needed to be flexible in their use of formal project management practices. Software was not seen as necessary or important for project management in academic libraries. These findings reflect the general project management literature, where clear goals, realistic schedules, and management support were found to be more critical than knowledge and adherence to project management industry standards.²³ While the use of informal methods allows flexibility, project managers potentially lose some efficiency in having to re-invent the process for each project. Ideally, the project manager deliberately reviews project management techniques used, and begins to develop a consistent approach that can be re-used or re-purposed for future projects. Considering that many staff members may be called upon to lead a project, efficient organizations should establish standard project management techniques to be used within their organization.

Our survey revealed additional findings that did not match up directly to one of our research questions. First, responses sprinkled throughout the survey revealed a certain level of dysfunction was present within web project management activities. For example, when participants were asked how a library decided which groups handled which projects, seven responses focused on dysfunctional behaviors. Among the comments were mentions of decisions made based on self-interest more than on users, decisions made by those without

technical or design skills, political considerations, abandoned projects, unclear priorities, and work happening both without collaboration across the organization as well as with too much participation (“Everyone gets to stick their fingers in the process”). These comments suggest that learning more about creating and managing web groups would be helpful for all libraries. Web project managers should also be ready to involve the supervisors of dysfunctional team members when trying to resolve problems. By envisioning project management as its own task, libraries can separate managing the project’s needs (which should be handled by the web project manager) from managing personnel or performance problems (which should be handled by supervisors). One way a web project manager can support both these areas is to set up clear expectations about team members’ responsibilities at the beginning of projects and to review project workload with members’ supervisors.

Future Research and Conclusion

This study suggests many possible directions for further research. Additional detail about what makes web-related teams and work groups successful could be useful to libraries, as well as learning what skills, behavioral traits, and other characteristics make web project managers most effective. What is the current state of LIS curriculum related to project management in general and web project management in particular? Are libraries seeking these skills? Studying web project management in specific types of libraries could also be illuminating: some of the challenges facing large libraries and small libraries are quite different. Library mission could also play a role; a research-intensive university library may have different project management challenges than a student-centered college. Future studies could also examine how web work differs depending on where in the organization project management is centered: both existing literature and this study revealed that web project management can occur in many library departments, but public services and technology departments predominate. If a library were deciding where to concentrate web project management work, what would be the arguments for placing it within public services versus technology? Finally, web work is an area where librarians and library professional staff work side-by-side. What are the challenges and opportunities in this type of arrangement?

Given that libraries can easily spend more than half of their materials budget on electronic resources which are not searched by public search engines, the library web site continues to be a critical portal. Learning how to accomplish web work in an organization will take project management, attention to workflow, and stewardship of resources. This study suggested several areas where libraries can make improvements. First, the organic growth of web project management in academic libraries needs to be reviewed by library administrators. Based on institutional and peer experiences, what are the best practices for managing a library’s web presence? From this survey, it also seems prudent to ensure each major unit has some project management skills. As part of this review, job descriptions may need to be significantly revised in order to be accurate and forward-thinking. The resource of staff time should be spent as carefully as money. Second, libraries need to review their web committees and teams. Such groups can be powerful forces for positive change or hotbeds of dysfunction. Choices related to

team composition and membership should be deliberate and based on the needs of the project. Someone with experience in web project management should be consulted in the formation of both web advisory committees and project-based task forces. Finally, web project managers in libraries should conduct post-mortem analyses on projects to hone their methods. Sharing communication and documentation practices with the rest of the organization can improve project management practices in other units, which benefits the whole organization. In all these areas, library administrators and web project managers should work together, providing a combination of authority and expertise.

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The authors would like to thank Meris Mandernach and Patrick Ragland for their comments on this paper, and Carl Nelson for his editorial assistance.

Submitted: 31 May 2011

Accepted: 12 July 2011

Published: 3 August 2011