



Web Content Strategy in Academic Libraries: Methods and Maturity

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abstract: This paper presents a qualitative analysis of nine interviews with academic library practitioners discussing their approaches to Web content strategy work. Findings reveal shared challenges and suggest that, while awareness of content strategy appears to be growing, its practice remains intermittent for many. An updated version of a Content Strategy Maturity Model for Academic Libraries, reflecting participants' comments regarding planning, creation, delivery, governance, and user experience, provides a means to address these challenges flexibly within an institution's culture, resources, and circumstances. Participants also discuss the purpose of the library website and impact of the COVID-19 pandemic.

Introduction

The 2019 article "Library-Authored Web Content and the Need for Content Strategy" summarized the literature to date regarding academic libraries' historic and current use of Web content management systems. It noted that challenges have emerged over time as libraries have attempted to administer significant amounts of library-authored content hosted in multiple content management platforms. The article concluded that the emergence of Web content strategy as a practice provides a means to address these challenges.¹

Web content strategy, as defined by Kristina Halvorson, is "the practice of planning for the creation, delivery, and governance of useful, usable content."² Deriving from this definition, the

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authors further articulate five distinct elements of content strategy: planning, creation, delivery, governance, and user experience (UX). As defined by the Nielsen Norman Group, a user experience consulting firm, “‘User experience’ encompasses all aspects of the end-user’s interaction with the company, its services, and its products.”³

A 2021 article reported on the findings of a Web-based survey of library practitioners in North American academic and research libraries. The survey investigated the degree to which Web content strategy factored into the actions, policies, and practices of academic librarianship. The influence of UX thinking and methods in library practice and their growing maturity was clearly evidenced in survey responses. Other elements of content strategy, notably delivery, were less mentioned. While approximately 80 percent of survey respondents were familiar with the concept of Web content strategy, only 20 percent of them “reported that their library had either a documented web content strategy or web content governance policy.”³ This same article also noted that no suitable measure existed for estimating the maturity of Web content strategy practice for academic libraries. To fill this gap, the article proposed a “work in progress” model for estimating the maturity of Web content strategy, the Content Strategy Maturity Model for Academic Libraries.⁴

The authors wished to validate the usefulness of this proposed maturity model across a variety of academic libraries through direct interviews in which practitioners could share their assessments of the model as well as their experiences and practices. In this paper, the authors analyze nine interviews with academic library practitioners discussing the Content Strategy Maturity Model and their approaches to planning, creation, delivery, governance, and user experience, respective to Web content strategy work. A substantially updated version of the model is presented, reflecting participants’ comments and suggestions on both its content and structure (see Table 3). The authors examine trends and themes emerging from the interviews and conclude with proposals of how the model might support library Web content strategy practice at all levels, in particular helping those who wish to give their content strategy new attention.

Literature Review

Web Content Strategy and Its Practice in Libraries

Although closely related to user experience practice, until recently the discipline and practice of Web content strategy have not been covered in the library literature, contrasting with the vigorous discussion of UX covered later in this paper. As previously defined,

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content strategy is “the practice of planning for the creation, delivery, and governance of useful, usable content.”⁵ A few early, in-depth discussions of content strategy appear in the literature of other fields, for example the 2002 monograph *Managing Enterprise Content: A Unified Content Strategy*. Kristina Halvorson’s work in this area is generally acknowledged as seminal, notably her 2012 book *Content Strategy for the Web*.⁶ Erin Kissane identifies

the “legacy” of content strategy as emerging from “four most influential fields: editorial work, curatorial work, marketing and persuasion, and information science.”⁷

In one of the earliest mentions of content strategy in the library literature, Rahel Anne Bailie’s 2011 article in the *Bulletin of the American Society for Information Science and Technology* summarized it as “a repeatable system that governs the management of content throughout the entire lifecycle.”⁹ In 2012, Emily Morton-Owens noted, “A content strategist would be concerned with why content is meaningful in addition to how it is managed.”¹⁰

In 2013, Rebecca Blakiston called content strategy “absolutely essential for the future success of library websites if our content is to remain useful, usable, and findable.”¹¹ Blakiston has been a thought leader in this area of practice within libraries, describing the development of a content strategy for the University of Arizona website in 2013, advocating for content strategist positions in libraries in 2015, and in 2017 publishing a book on writing for the Web.¹²

Sandra Wong developed and implemented a targeted content strategy, noting, “Applying a content strategy to a small subset of the library’s website, such as the database list, can rationalize the library’s database list and promote continuity and stability among the many hundreds of electronic resources made available by the library.”¹³ A recent survey investigating content strategy practices of academic libraries using LibGuides found that “half of responding institutions had content guidelines which focused on easily quantifiable aspects of guides such as their design, title, and type . . . most academic libraries continue to operate under a distributed content authorship model.”¹⁴

Other recent articles recommend readings and techniques to develop and implement content strategy within library settings, such as editorial tools (for example, a content calendar or style guide), usage and analytics reporting, and persona development.¹⁵ The proposed Content Strategy Maturity Model for Academic Libraries, published in 2021 and analyzed and revised in this paper, describes increasing maturity in Web content strategy practice across the five elements of planning, creation, delivery, governance, and UX, presented as incremental steps in five cumulative levels.

Maturity Models for Library Practice

Maturity models, originating in software development but now appearing widely across disciplines and practices, provide “an effective tool to assess the current capabilities and the future needs of an organization, process, or group.”¹⁶ These models are typically approached as a diagnostic measure and most commonly include five progressive stages, or levels: “Each level represents a measure of the effectiveness of any specific process or program, from ad-hoc immature processes to disciplined, mature, and continuously improving processes . . . Actual activities are compared with the details at each level to see what level these best align to.”¹⁶

Amit Tiwari and Devika Madalli identified 12 maturity models specific to library and information science practice, primarily related to digital libraries or research data management and curation.¹⁷ Library-focused maturity models have also been developed for evidence-based library and information practice, book purchasing, and library assessment, as well as the aforementioned model related to Web content strategy and two specific to library UX.¹⁸



Library UX Community of Practice: Research and Maturity

With increasing frequency and sophistication, discussions of UX have appeared in the library literature for “at least two decades.”¹⁹ Scattered mentions occur even earlier, using different terminology. Robert Taylor’s seminal 1968 article on question negotiation and the reference interview frames its arguments in what would currently be considered a user-focused approach to librarianship. Taylor observes at one point “that libraries are very frustrating to use and that library systems need considerably more experimental work to enhance this interface between user and library.”²⁰ Nearly 50 years later, Steven Bell’s 2014 article “Staying True to the Core: Designing the Future Academic Library Experience” provides a concise and thorough summary of the evolution of both library user experience literature and practice up to that time.²¹

Four recent interview-based studies focused on the maturity and growth of the UX community of practice in libraries. Craig MacDonald’s work discussing UX librarianship both from the perspective of the individual and from that of the organization has been widely influential.²² His 2017 article states, “To create lasting and sustained change, UX needs to be clearly articulated in the organization’s written strategy or vision statement, and ideally be supplemented by design principles or guidelines that apply to all digital interfaces and services.”²³

Robin Bergart and Juliene McLaughlin interviewed 15 UX practitioners focused “explicitly on the connection between UX research, libraries, and trust.”²⁴ Their findings underscored the importance of a functioning, robust community of practice, noting “the value of connecting with other UX practitioners for ideas, strategies, and support.”²⁵

In her 2020 article “Structuring and Supporting UX Work in Libraries,” Shelley Gullikson noted, “UX can also be shorthand for UX research: the work done to understand the user and their experience. UX can also refer to UX design: the work done to create a good user experience, iterating improvements through UX research.”²⁶ In presenting her analysis of interviews with 30 UX practitioners in libraries, she concluded:

Moving UX forward in academic libraries requires strong support from management that makes it clear that UX is valued and expected work. We need to have authority to implement our own recommendations, or . . . to ensure that others implement them. We need UX work to be the work of more than one person and to have a wider focus than the web.²⁷

Also in 2020, Scott Young, Zoe Chao, and Adam Chandler proposed a “library-focused maturity scale with recommended practices for advancing UX maturity in academic libraries.”²⁸ Acknowledging the complementary relationship between the practice of UX and Web content strategy in librarianship, the authors of the current article seek to contribute to the library literature through presenting a measure suitable for articulating the levels and practices for advancing Web content maturity in academic libraries.

Methods

The subject population consisted of 27 individuals from North American academic and research libraries who indicated, in their response to a previous study conducted in spring 2020, their willingness to be contacted by the authors for future research.



Following review and approval of the current research study protocol by the authors' institutional review boards, the 27 individuals were invited to participate in this study via direct e-mail contact in December 2020 (see Appendix A).

In the initial message, the authors explained the purpose of the study, advised potential participants of possible risks and their ability to withdraw at any time, and included a link to a preinterview questionnaire (see Appendix B). The questionnaire was available for four weeks. One week prior to the closure of the preinterview survey, the authors sent a reminder message to participants who had neither completed the questionnaire and scheduled an appointment nor indicated they would not participate in this research project.

In total, nine individuals opted to participate, representing one-third of the total subject population. Informed consent was obtained via the first question in the preinterview questionnaire. Participants were asked to schedule an interview time of their choosing via a Web-based calendaring system. Responses to the questionnaire were compiled by the survey software.

Interview Procedures

Participants who scheduled an interview received a confirmation e-mail that included connection information for their appointment, as well as a copy of the interview questions and the proposed Content Strategy Maturity Model for Academic Libraries (see Appendix C). Coded identifiers were assigned to each participant to track recordings, debrief notes, and survey responses. Semi-structured interviews of 55 minutes were conducted with each participant via Zoom in January and February 2021; all interviews were carried out by the same member of the research team. In these interviews, participants commented on the Content Strategy Maturity Model, provided more in-depth information about practice at their institutions, and shared personal reflections on their work. Audio recording was mandatory, and all participants optionally enabled video.

Sessions were recorded and uploaded to Zoom Cloud for transcription, then downloaded to Google Drive for analysis. For interview transcripts, the authors conducted a thematic content analysis to determine the most common topics. They stored survey responses and debrief notes designated by coded identifiers. Debrief notes were completed within 72 hours of the interview by the member of the research team who did not conduct the discussion and then were cross-checked and supplemented by the interviewer. Notes captured meaningful direct quotations—some have been lightly edited for clarity—and represented the participant's statements, not the authors' impression of their remarks. After all interviews and debrief notes were completed, the authors used inductive coding to annotate the notes and maintained a codebook as trends and broader themes emerged (see Appendix D).

Potential Limitations of Methodology

The authors acknowledge that the recruitment methodology excluded individuals who were not identified as contacts via the earlier research study or who newly came into positions in the interim. Further, the time commitment inherent in an interview study may have dissuaded participation, and the extenuating circumstances of the pandemic



may also have made participation difficult. While 9 individuals and the overall sample size of 27 are not sufficient to represent the entirety of North American academic libraries, as a qualitative study, this research presents useful insights into the current practices and views of practitioners in this area.

Findings

As part of the preinterview questionnaire, participants (N = 9) were asked a few questions about their institution, covering basic demographic information and their assessment of elements of Web content strategy practice currently in place, to contextualize their comments.

Interview Participants

Participants generally represent medium to large institutions, with seven reporting the estimated total number of employees at their library as greater than 100. When asked the number of employees with website editing privileges, five participants reported "More than 20," one "Between 11 and 20," and three "Less than five." Along with the earlier acknowledgment of the limited sample, the authors also recognize that the overall practitioner community is small. To maintain privacy for participants, gender-neutral pronouns and gender-neutral pseudonyms for direct quotations are used in the discussion of findings.

Brief characterizations of the participants, scoped to protect their privacy, are provided here for additional context. "Solo" versus varying sizes of "teams" refers to the degree of individual responsibility respective to managing their library website.

- Alex works with a small team.
- Blake is a department head.
- Casey works with a small team.
- Drew is solo with many other duties.
- Emerson works with a medium-sized team.
- Frankie works with a medium-sized team.
- Glenn is an administrator.
- Harper is a department head.
- Jordan works with one other person.

Content Strategy Practices

Participants were asked to provide the authors with their personal assessments of institutional content strategy practices to inform revisions of the Content Strategy Maturity Model. They were first asked to respond to the statement "This is currently in practice at my institution" for each of the five content strategy elements, defined briefly within the survey instrument as follows:

- Planning: Use an intentional and strategic approach, including brand, style, and writing best practices.
- Creation: Employ editorial workflows, consider content structure, support writing.

- Delivery: Consider findability, discoverability, and search engine optimization, plus choice of content platform or channels.
- Governance: Support maintenance and life cycle of content, as well as measurement and evaluation.
- User Experience: Consider needs of the user to produce content that is relevant, current, clear, concise, and in context.

Responses were given via a four-point scale, ranging from definitely true to definitely false. The results indicated the most confidence in the practice of elements of UX and delivery and the least confidence in governance (see Table 1). No responses of “definitely false” were given.

Participants were also asked to rank the elements of content strategy in priority order, based on their observations of practice in their library (see Table 2). The most frequent responses were as follows: Rank 1, UX; Rank 2, UX; Rank 3, creation; Rank 4, planning; and Rank 5, governance. These responses align broadly with findings from the previously mentioned 2021 research paper indicating “higher levels of maturity in the elements of planning, creation and UX, and lower levels in the elements of delivery and governance.”³⁰ Finally, participants were asked to self-assess the content strategy maturity of their organization, with four responses each for “basic” and “intermediate” and one response of “advanced.”

Revisions to the Content Strategy Maturity Model

Several participants noted that taking part in this interview research project and reviewing the Content Strategy Maturity Model provided the opportunity to reflect on elements of Web content strategy practice they had not previously considered or to reflect on their practice in a new way. For example, Frankie remarked, “It’s interesting. I feel the maturity model almost seems like [Abraham] Maslow’s hierarchy of needs in a particular way. There are some basic things you can do before you wind up at level 5: Thriving.”

Table 1.
Elements of Web content strategy that library practitioners report are “currently in practice” at their institution

Element	Definitely true	Somewhat true	Somewhat false
Planning	2	6	1
Creation	2	6	1
Delivery	4	4	1
Governance	1	5	3
User experience	6	2	1



Table 2.

Library practitioners' priority ranking of the elements of Web content strategy

Element	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Planning	1	2	2	3	1
Creation	3	1	3	2	1
Delivery	1	2	2	2	2
Governance	--	1	1	1	6
User experience	4	3	1	1	--

Emerson commented, "One thing that I really love about this is how none of the titles for the levels are negative sounding, they all sound like 'you do good work.'" Overall, participants responded positively to the proposed version of Content Strategy Maturity Model the authors shared at their interviews (see Appendix C). Glenn said, "I could see us using it tomorrow."

Multiple participants commented that aspects of the layout of the model limited their ability to view it as a flexible diagnostic tool, as in this comment from Emerson: "It feels very much like based on this presentation . . . I couldn't fall between one of these levels . . . It feels more like a rubric than a scale . . . Is there another way to present this where you could feel like, 'I'm kind of like a 3.5?'" Blake commented that the bullet point formatting might cause readers to

feel like, well, "We're really mature in this particular area, but . . . the rest of the bullet points all fit fine for level 3, but there's this one bullet point that's an outlier for us." I don't know if a caveat as you present the model might be helpful in addressing that possibility, or . . . we all acknowledge that, like, a model is a model and not every bullet is going to fit perfectly for every level across the board.

When asked during the interview to identify the current level for their organization as articulated in the maturity model, responses ranged from "a little higher than a 1" to a 4. No one identified as a level 5. Two participants indicated their organizations were a level 3. As noted earlier, few participants solidly selected a single level, instead giving such responses as "three plus," "three working to four," and "a four with caveats." These self-ratings are roughly equivalent to those expressed through the preinterview questionnaire.

Incorporating these comments, the authors present a revised model in Table 3, featuring a landscape layout to emphasize free movement across and between the levels; the



elimination of the bullet points; and the addition of introductory text. More substantive revisions drawn from analysis of participants' in-depth discussions of practice, detailed further in the next sections of this paper, include updated language better delineating the progression inherent in and across each level, strengthening alignment with the five elements of content strategy within each level, and expanding the articulation of the impact of institutional commitment to content strategy maturity.

Role of the Library Website

One of the interview questions asked participants to describe their perception of the role of the library website, and their answers provide a useful context for the remainder of the findings. Given the subject population of library Web professionals, it is unsurprising that almost all participants emphasized the centrality of the library website as a means of providing, supporting, and extending library services and resources. Two described the role of the library website as "critical," using the phrase "front door."

Almost all participants emphasized the centrality of the library website as a means of providing, supporting, and extending library services and resources.

Other answers acknowledged dissonance between library employee expectations for website usage by end users versus actual website usage by those users. Blake commented,

There's a large subset of our staff who feel like the library website is the end-all, be-all, and they are the ones who . . . want to fight over what they consider to be prime real estate on the home page, what are the links that we're presenting. I tend not to be at that place . . . It's hard . . . to accept that the library home page is not as quite as important as we might think it is, it's not the home page for everybody.

Some comments illustrated disagreements or difficulties related to balancing the roles of the website as a gateway to scholarly resources and as a means of raising awareness of library services and resources, with varying degrees of ambivalence related to the latter. Drew shared concerns:

When the [central communications department] came and took control of the website, one of the things that they said to us was [that] we had too many pages, we have too much information . . . So I took that to be kind of a misunderstanding of what we see the role of our website as opposed to what they do, which is really coming more from a marketing admissions perspective, where we're looking at it as an information resource tool.

Casey described a different perspective: "In addition to connecting people with resources . . . we've tried in some instances to make [the website] sort of a flashy thing that says, 'Here's what we have, here's why we're important, here's why we're unique.'"

Emerson described the website in terms of future directions:

I see [the purpose of the website] as the reimagining of the libraries . . . But it [is not] just like a facsimile of the in-person things, so the reimagining and not just being a facsimile of the in-person experience is what I'm really excited about and hopeful about in my

Table 3.
Web Content Strategy Maturity Model for Academic Libraries (revised)

This model is a tool for evaluating the current state of your library's Web content strategy, facilitating conversations, identifying growth opportunities, and setting goals. Activities described at each level are incremental and additive.

Element	Level 1: Ad hoc	Level 2: Establishing	Level 3: Scaling	Level 4: Sustaining	Level 5: Thriving
Planning	Lack of focused planning.	Some planning and evidence of strategy (content audits, style guide); may be localized.	Intentional and proactive planning coordinated across multiple units.	Able to respond to organizational priorities; guidelines, best practices widely accepted.	Clear strategic plan or vision for the website and Web presence established.
Creation	Creation is reactive, distributed, potentially chaotic.	Basic coordination of content creation tasks.	Foundational content creation workflows in place across organization.	Established content creation workflows coordinated through individual, department, other governing body.	Full life cycle of content managed in coordination across all library-authored Web content platforms.
Delivery	Delivery and findability not considered.	Delivery and findability in practice haphazardly or without intentionality.	Awareness of delivery and findability strategies, but practice may be intermittent.	Consideration of findability and articulation of distinct communication channels or platforms.	Intentional and consistent use of channels and application of best practices for findability.
Governance: Life cycle and processes	No governance structures or documentation in place.	Governance is informal with no or minimal documentation.	Governance documents and workflows may be at a foundational level.	Well-established governance documents and workflows.	Governance widely accepted with policies, procedures, and accountability.
Governance: Measurement and evaluation	Evaluation and maintenance not, or minimally, practiced.	Basic content maintenance practice; collection of usage data.	Maintenance generally reactive; may enable automated link checking; some usage data analysis.	Proactive maintenance process in place; regular evaluation via usage data analysis or other methods.	Strategic, recurrent maintenance and evaluation processes established.



User experience	User experience (UX) not, or minimally, considered.	Some consideration of UX in creation and structure of content.	UX regularly integrated into content workflows; reliance on best practices, industry standards.	Proactive UX processes in place; defined user group(s) drive decision-making.	Strategic, recurrent UX processes established; clear articulation of localized end user needs .
Institutional commitment	Responsibility for primary website is unclear or indiscriminate.	Designated individual or group provides some level of oversight for the primary website.	Responsibility for primary website content creation and maintenance assigned to a permanent position (authority varies).	Web content strategy explicitly assigned partly or fully to a permanent position.	Basic understanding of content strategy concepts and importance across the organization

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job for the next few years, is, that being the core of the website experience . . . using the library through the website is just on par, or even better than going in person, like you can do so much more, you can be more effective, using our services through the Web.

Casey observed, “I think that those people who use the library website as a way of doing their own jobs, they also know deep in their hearts that the library website is for students, faculty, and staff outside of the library to be able to be connected to resources. I know that they know that.” Our analysis and discussion of the remainder of the interviews follows, grouped topically by each element of content strategy.

Planning

The element of planning involves approaching Web content with intentionality and considering alignment with a broader strategic plan or vision for the website and Web presence as a whole. It may include setting goals, ongoing discovery and auditing, and establishing best practices for brand, style, and writing.

While the majority of participants reported less confidence in commitment to planning relative to content strategy in the preinterview questionnaire, seven did discuss having oversight or guidance of the strategy and direction of the website in their interviews, indicating that at minimum, maturity levels in this area were at a level 2. A wide range of oversight structures were represented across participants, including individual, departmental, by teams or committees, and some combinations, including models with smaller task groups alongside larger advisory bodies. In Alex’s case, an advisory group had begun to look beyond the website to broadly consider the library’s Web presence as a whole.

All but Blake described an established relationship with the library’s communication, marketing, or external relations staff; an institutional level communications or Web office; or both. These connections ranged from largely transactional—such as updates to the website needing approval from the institutional office—to highly integrated and collaborative, with Casey’s role sitting directly within library communication. Casey said: “Putting the library website within [communication] was a deliberate decision, and it sort of said something about the purpose of the website . . . It made it seem like the website was a tool to market ourselves . . . and also communicate our resources and services.” Connections to the institutional office were otherwise related to specific guidelines or policies. Two participants noted their respective offices provided guidance for branding and institutional voice, writing for the Web, and the like, with mentions of institutional accessibility policies and visual style guides.

Seven participants discussed their use of library-created style or writing guides with varying content, including writing for the Web, search engine optimization, and terms and punctuation. Emerson mentioned additional guidelines related to creation of accessible content. This frequency in practice, along with the aforementioned use of institutional guidelines, aligns with past research findings around the prominence of style guides as a Web content strategy tool within academic libraries.³¹

In discussions of style guides, many of the participants also brought up guidelines for voice, tone, or both, an important foundation for creating Web content. Voice is the organization’s personality as it comes through in writing, while tone changes to fit the



situation. Most mentions were brief. Demonstrating deeper engagement with the concept, aligned with level 4 of the Content Strategy Maturity Model, Alex discussed a small group activity for determining voice, using descriptor cards to select what the library was and was not like, a common method for articulating an organization's voice in industry.

Another standard planning tool in this area commensurate with level 4 of the Content Strategy Maturity Model is a content inventory or audit, which produces a listing of all pages and URLs with authorship, recency, position in the information architecture, and other pertinent facts. Inventories were mentioned by two participants, both in the context of preparing for a major website redesign rather than as an ongoing strategy. Content calendars, used for managing dynamic content that runs frequently or requires regular updates, were mentioned once by Frankie in a specific reference to news stories.

Creation

Likely the most recognizable element of Web content practice, creation includes who produces content and how, including any editorial workflows, writing, or other content development. In the preinterview questionnaire, six of nine participants said it was only "somewhat true" that strategies related to creation were practiced at their institution. Creation appeared in multiple placements, across ranks one through four, in the responses ranking prioritization of content strategy elements in practice.

Across all participants, the details of the content creation process were most shaped by whether the library used a centralized or decentralized model. These models are discussed in more depth later in the paper in the section "Governance."

Six participants discussed a significant role in content creation by library communication staff, including day-to-day management of the website, whether contributing broadly to site content or focusing on specific kinds of material (for example, news). For Emerson, the communication staff member coordinates 30 or so content writers, has a regular meeting with them to check in, and reviews content as it goes up, but also "tries to work with people from the beginning so there isn't too much that needs to be reviewed."

Demonstrating basic coordination of content creation tasks as noted in level 2 of the Content Strategy Maturity Model, five participants distinguished between requests for minor edits versus more significant changes or brand-new content and reported that these categories of requests were handled differently. Processes for larger changes followed a similar pattern wherein requests were triaged using various processes around stakeholder discussion prior to content creation. Frankie starts evaluating requests for need and placement on the site and then refers the request to the communication staff to work with stakeholders on creating the content. Others discussed how requests are submitted to their team, but if a request is unclear or out of scope, they meet with the stakeholders to discuss how to approach the matter. Alex declares having "many a workflow document"; the process starts with a request to the website's manager to talk about new ideas for content. Harper noted that any major request triggers a content strategy session.

The meetings, conversations, and sessions mentioned by participants all involved stakeholder consultations to think critically through content needs, goals, and structures prior to considering design, reflecting the presence of foundational content creation

workflows that would be expected at level 3 of the Content Strategy Maturity Model. Tools and methods mentioned included a content planning template covering audience, a call-to-action for the page, anticipated maintenance needs to ensure accountability, and similar exercises or documents capturing audience, page goals or objectives, functional requirements, and metrics. While the importance of knowing the audience for a page to inform its structure was emphasized by a couple of participants, discussions of audience tended to fall more broadly under general UX practices.

In discussions of content creation workflows, mentions of the actual acts of writing and editing were scant, though most participants had a structure in place to manage changes. Casey discussed repeated cycles of reviewing and editing before eventually publishing the content. Frankie noted that much existing content seldom changed.

Some libraries employ distributed responsibility for editing and maintaining existing content through a designated content manager role, while others expect individuals in these roles to also take responsibility for creation of new content in addition to maintenance work. Content managers are frequently representatives from organizational departments that either volunteer or are selected by their department head. Characteristics noted as important for content managers included commitment to being trained and active in the role, understanding the value of writing for the Web, and having good communication skills. Blake noted they are working toward including these responsibilities into job descriptions, while Alex said that was formerly the case but is not so any longer.

Delivery

The element of delivery encompasses the findability of content within the primary site, as well as its discoverability through the broader Web and search engine optimization techniques. It includes an intentional approach to identifying distinct communication channels or platforms for various content types or topics (for example, designating that Web-based course guides are delivered via the LibGuides platform).

Participants reported some level of confidence in their institutional practice of delivery, with one reply of “somewhat false.” Of all the elements, however, delivery elicited the most variation in its priority ranking, appearing in all five potential positions: one response of first, two responses of second, three responses of third, and two responses each for fourth and fifth.

Overall, discussion reflected an awareness of delivery and findability techniques with intermittent practice, which is associated with level 3 of the Content Strategy Maturity Model. A variety of techniques supporting findability and discoverability were discussed, including the importance of information architecture, navigation, page headings, and careful selection of home page content. Alex mused on the importance of information architecture, beginning with a quotation from an unnamed source:

“Your information architecture tells the story of who you are as an organization.” So there’s the Venn diagram of user needs and organizational needs and how do we do both of those by having what users are looking for really driving what you’re putting on your site, but also realizing they might not know that we have something that could be of great value to them, and how do we make sure that we put that in front of them too.



A majority of participants discussed the prevalence of search engines, specifically Google, in directing end users to library websites. Blake pragmatically noted, “[It’s] not as if they go to the [library] home page and click through all the navigation.” Harper said, “We care a lot about how people find us in Google.” Glenn agreed, noting they approach “coordinated discovery assuming you’re not starting with us. You’re more likely to get dropped in from somewhere else.” In an articulation of the importance of specific communications channels, some discussed Google Business profiles, acknowledging that many end users do not visit the library website for information about opening hours, instead relying on Google.

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Participants mentioned methods to optimize crawling of content by search engines, including generating site maps for submission to Google, following best practices for URL management (for example, establishing naming patterns or creating human-readable URLs), and creating meaningful hierarchy through descriptive page titles and appropriate use of headings within page content. A few mentioned the importance of keywords, some specifically noting use of the Drupal module Metatags for this purpose. According to Emerson, their content modeling process asks, “What are the pieces of information they’re going to need to fill out on the [content management system] side that allows the information to be discovered?”

A few concepts were mentioned that seem more aligned with strategic approaches or awareness of best practices characteristic of higher content strategy maturity levels: implementing a custom Google site search, regularly reviewing search terms to identify areas where discoverability or findability could be improved, and avoiding duplicate content throughout the site. Alex explained: “If someone’s searching for a specific topic and there’s four different web pages that all address that topic, now you have a problem with discoverability . . . we try and build that into our workflows to avoid that [duplication] so it’s clear which page is answering which questions.”

Jordan acknowledged that decisions around channel selection can be challenging: “We think we’ve been able to determine that the website is informational and a LibGuide should be instructional, but it’s still very hard to separate those two.” Frankie commented on the importance of coordination across channels: “Communicating information out and making people aware of it is not solely the responsibility of the website . . . They don’t see it holistically as, that’s part of it, but we should also talk to these other people.” Harper specifically mentioned that their content strategy extended from the website to physical and digital signage.

On a related note, some pointed to the role of the institution’s website in the discoverability of library Web content, with three explicit mentions of the library website being linked from the institution’s home page or indexed by the institutional site search. Representing the comments of multiple participants, Drew commented: “We actually have one of the top pages used on the [institution’s] website . . . I want to say top four, if not number two, destination on the [institution’s] website, so obviously [the library website] has some significance.” Glenn discussed the role of integration with campus



Web services, such as learning management systems, in pushing content from libraries to users of those services.

Governance

Governance entails the coordination of content maintenance and management of the full content life cycle from creation through revision or retirement, including measurement and evaluation through analysis of usage data, testing, and other means. Governance requires clear processes—including who has decision-making authority—and there may be associated policies and procedures. In the Content Strategy Maturity Model, the elements of governance are divided to more effectively articulate activities related to (1) life cycle and processes, and (2) measurement and evaluation.

Of all the elements of content strategy, governance was unique in that three participants found it “somewhat false” that governance was in practice at their institution. Five reported it was “somewhat true,” and only one said “definitely true.” Governance also consistently ranked lowest in the priority order of content strategy elements observed in practice, with six participants ranking it last and no one ranking it first. Though the word *governance* was rarely used by participants, the concept came up in some capacity in every discussion at varying levels of depth.

A core component of governance centers on decision-making throughout the Web content life cycle, which frequently relates to the ability to add or edit content on the site. This may be structured in either centralized models, where a small number of people make decisions, or distributed models, where responsibility is spread across the organization in some way (for example, a committee, team, or advisory group). Participants’ descriptions of practices were essentially split, with four reporting centralized models and five distributed models.

Two of the participants in centralized models handled most tasks independently, employing less formal processes associated with level 2 of the Content Strategy Maturity Model, including meetings with service owners to discuss requests as needed. The other two used structured, approval-based content governance models for new content and substantial changes, reflecting slightly higher maturity, as in level 3. Alex described the goal as “trying to find that balance between not being a burden to people that have useful services they want to get out in the world, but also making sure we’re not just having the Wild West of content on our site.”

Some participants discussed lightweight distributed models with large groups of individuals or teams being responsible for editing content, often with assigned pages or sections. When specified, the number of site editors in distributed models ranged from 30 to 80 individuals. Three participants with distributed models described providing guidance without strict enforcement, which aligns with the informal governance and minimal documentation of level 2 of the Content Strategy Maturity Model. Emerson stated that, while they have writing guidelines and communication staff oversight, “There is no one who has the authority to say, you need to write this better or we’re not publishing it . . . there’s no one who can be that strict with it.” Frankie noted, “There isn’t a litmus test for ‘Is this page actually needed on the site?’” Glenn discussed it from a structural perspective, noting that the design and information architecture are well established, but editors have some flexibility.



Others with experience in a distributed model include Harper, who explained that while numerous staff have site editing privileges, they have noticed a trend toward requests to their team for edits. Harper commented, “What we have now is people confident that if people just ask us to do it, we’ll get it done quickly enough.” This appears to reflect a transition from level 2 to 3 of the Content Strategy Maturity Model, with governance being at a foundational level. Blake talked at length about finding that their distributed model, based on shared responsibility where individuals oversee specific sections of the site, allows their team to demonstrate the importance of the library website across the organization. While they are now moving toward a more centralized model with an editorial board, an example of well-established governance aligned with level 4, they “don’t want to become so heavy-handed that people feel like they can’t do anything themselves and nothing ends up being done because they don’t feel like asking someone else.”

Similar to processes regarding creation of content, processes for regularly reviewing and updating content vary. Multiple participants noted that ongoing updates and evaluation were left up to the specific subject matter experts or individuals in charge of the content, an expression of basic content maintenance aligned with level 2 of the Content Strategy Maturity Model. Harper observed that as new individuals joined the organization, or colleagues changed roles, they might inherit content and desire to update and improve it, though this was contextualized as an imperfect approach due to its inconsistency and reliance on individual preference. Some participants admitted they could do more to regularly review their content and update it as necessary. Drew simply stated, “The life cycle is we create stuff and it’s there.”

The tool Siteimprove was mentioned for routine monitoring and reports on broken links, misspellings and such, as were link checkers, which are the types of automated checking expected in level 3 of the Content Strategy Maturity Model. There was discussion of accessibility checks for identifying issues in need of remediation, including a focused accessibility review of all content. Also mentioned were regular accessibility checks that also find content issues, such as using “click here” for link labels, a practice which provides insufficient information to individuals making use of assistive technology. Some participants discussed more qualitative reviews, aligned with the proactive maintenance of level 4, including annual meetings with stakeholders to review content, discuss continued relevance, look at analytics, and plan changes. Frankie has begun exploring a review process specifically to manage outdated news content.

Respecting the evaluation element of governance, Glenn noted they are not systematic about assessment, but consider whether content is still effective and up-to-date. Jordan admitted that they assume content is accurate until they hear from someone that it is not, and Harper said patrons let them know “when stuff is broken.” Using accuracy as a measure was brought up by other participants as well, describing a reactive process reflected in level 3 of the Content Strategy Maturity Model.

Google Analytics was mentioned by all but one participant in relation to goals, with Emerson also specifically mentioning Google Tag Manager. Usage of Google Analytics data ranged from the general to slightly more mature practices. Participants described level 2 practices focusing on the collection of usage data, such as compiling overall site metrics without a specific question in mind. Mentions of data usage practices to



answer questions from stakeholders about specific content expected at level 3 included monitoring referrals—in other words, tracking the sources of site traffic. Jordan said they “monitor Google Analytics, but that’s not really going to tell you too much about the content,” though they use metrics to pare down content as part of their most recent redesign. Frankie discussed the practice of archiving as a compromise when retiring pages to reassure stakeholders that the content is available if someone wants it.

Reflecting the regular evaluation present at level 4 of the Content Strategy Maturity Model, Emerson commented on the importance of planning to successfully carry out evaluation activities, by making “content intentionally and [saying], ‘These are the things we want to measure.’” Alex reflected that “people come to your site for content. So if you’ve identified your top tasks and you’re doing usability testing and people are successful, that’s also measuring your content.” Other ideas included setting goals and metrics around reading scores and reduction of broken links.

User Experience

The element of UX considers the needs of the end user and the degree to which content is relevant, current, clear, concise, and presented in a context sufficient to make it understandable, as well as appropriately placed in terms of user workflow. Application of user research methods, such as usability tests and user interviews, is encompassed within this element.

As noted earlier, participants indicated the highest level of confidence in UX practices, with only one replying “somewhat false” as their assessment of whether UX methods were currently in practice at their institution. Specific methods mentioned included, in approximate order of frequency, usability testing, personas, surveys, interviews, paper prototypes, card sorting, and reliance on heuristics, with specific mentions of Jakob Nielsen’s usability heuristics. Nielsen is a Danish expert on human-computer interaction whose 1994 list of principles for user experience and interface design is widely acknowledged as definitive. When asked to rank the five elements in priority order, a majority of respondents ranked UX highly, four placing it first and three second, with one each designating UX as a third or fourth priority. In keeping with this confidence, the majority of participants’ responses indicated practices generally aligned with levels 3 and above of the Content Strategy Maturity Model.

UX relates closely with the other four elements. Linking to both planning and creation, Harper discussed UX as a way of determining main objectives for content based on user needs, specifically citing a desire to avoid situations in which the primary initial focus is on a specific design outcome: “Let’s just really try hard to stop having meetings where people want to design.” Emerson described UX as a crucial part of the planning process for their agile software development team: “You can’t do UX at the same time the dev[elopment] is happening, it’s too late . . . I feel like we’ve been able to schedule things out a little bit better, which we definitely didn’t do before, so it’s a little more proactive, less reactive.” Relating UX to findability and delivery, Glenn asked, “Is it useful? Is it effective? Is it user-friendly, but also can you even find it?”

Accessibility as a practice related to ongoing maintenance was discussed previously, and this concept also arose in relation to UX methods and practices. Harper asked, “I



know why [some content has] been produced as pdfs over the years, but can we change that? Can this be HTML? So you know we're bringing accessibility principles, we're bringing simplicity and just good Web practices to [our work]."

Frankie described a "fairly robust assessment cycle." Glenn said, "We do a fair amount of user testing on main features, particularly around discoverability, or if we do reorganization to sections." Harper commented, "You can't test everything, but . . . if anybody gets into a debate about X versus Y, [the team's response is to say], 'Yeah, yeah, let's stop these librarians arguing about stuff and put it in front of users.'"

Casey touched on the importance of approaching user research collaboratively:

It makes me wish that I would partner with the people who manage [our discovery tool] if I'm ever going to do any sort of user surveys or interviews or usability testing because [end users] don't understand the difference between the two different platforms . . . working with other units in order to do user testing, not doing user testing in a silo as "I'm just managing the library website, and I'm going to do research on the website," but rather, working with other people to figure out how users can have a holistic experience.

Reflecting viewpoints and challenges that might be expected at levels 2 and 3 of the Content Strategy Maturity Model, Jordan commented on limitations in capacity due to a lack of dedicated personnel, saying, "I'd love to be able to do something on a regular basis, but we don't! It's a matter of bandwidth."

Two participants mentioned UX research as a response to anomalies in analytics and usage data, a proactive approach characteristic of level 4. Emerson declared, "We're doing regular user research, especially if something looks weird in the analytics or [for] something new." Harper remarked, "I like to look for 'weird stuff' . . . pages and tools that get way more attention than they were ever designed for, and . . . pages that we put a ton of work into, where they've been viewed like 20 times . . . to see if we've made a big deal out of something that no one cares about."

Articulating concepts appearing at levels 4 and 5 of the Content Strategy Maturity Model, Emerson pragmatically reflected on the role of well-established industry best practices in guiding UX decision-making:

When to know we need to go to our people and ask, how do people look at a bento box [multicompartment, segmented] search results design, how do people feel when they see something that wasn't what they were expecting . . . versus when do we just look at Nielsen Norman Group and be like, "Nope. We're not going to just put our whole navigation behind a hamburger menu."

Discussion

The lack of depth in discussing core approaches to content strategy planning, including style or writing guides, establishing voice and tone, and content inventories or audits, aligns with the middle-of-the-road feelings participants expressed regarding planning in the preinterview questionnaire. Similarly, the discussion of processes or approaches by which participants determined appropriate channels and platforms for delivery of content revealed struggles with clarity and consistency in this area of decision-making. Alex mentioned "the dreaded conversation, should this be a web page or a LibGuide."



This result may indicate an overall lack of maturity in these areas or could reflect a weakness in the questions posed around these topics.

A lack of a clear measure of success for Web content was a challenge for all participants. When asked how they determined whether their content met the goals they set, most participants were flummoxed. Alex laughed and asked, “How do you? Tell me how you do that.” Glenn reflected, “I wouldn’t say that we really have a primary audience, and sometimes that shows. And if we did [have a primary audience] and it was really targeted, maybe [the user experience] would be structured differently, which might make some of the assessment easier as well.” Frankie shared, “The truth is that there usually isn’t a goal beyond the creation of the content itself . . . Pages are created just to create the content, or they are [there] because they’ve always been there, right?”

Consensus clearly emerged around the idea that it is difficult to interpret and use Google Analytics meaningfully. Casey shared, “We don’t necessarily want someone to stay on this page. We want them to go away to this other resource. How do I use this data to make meaningful decisions about what to do next?” Similarly, participants’ comments illustrated a general recognition that usage metrics sit within a broader context and require careful consideration across any individual measure, such as page visits or time on page, even when using analytics to make decisions, such as review and revision of low-use pages or removal of low- or no-use pages. Overall, there was little discussion about later stages of the content life cycle such as retirement, beyond mentions of removing low-use content.

Practices supporting findability and discoverability were frequently acknowledged to be critical in how they supported search engine optimization, though several participants expressed degrees of ambivalence about findability or discoverability centering on some variant of the question, “Does findability/discoverability really matter for academic library websites?” Typical of the comments of others, Frankie stated, “I feel like we don’t do a lot to make it discoverable partly because at an academic library we have a closed audience in a way.” The authors conjecture that this concept of “a closed audience” extends beyond Web librarians as a more general perception across library organizations and may carry with it a subtle implication that adherence to best practices for Web content strategy is irrelevant.

The degree of planning and intentionality evident in UX practices varied, from highly structured and planned programs to largely reactive approaches, as well as points in between. Blake described the formation of a UX team more than five years ago and stated, “People understand what UX is . . . not just Web UX but really thinking about UX at the physical spaces and of the whole service . . . Almost every Web project has some kind of a user research [element].”

Overarching Themes

In general, while awareness of content strategy appeared to be growing, for many, its practice remained intermittent or closely tied to a major event such as a site redesign, particularly for governance activities, such as maintenance and evaluation. In a broadly representative comment, one participant stated, “It was kind of like we launched, and then we moved on to other priorities and such, and so now we’re kind of circling back



around and know that there's a need to evaluate the content again. Instead of having an ongoing program, we are more reactive, we do it on an as-needed basis—which is not that great because it's always needed."

Limitations of time and resources were a challenge for many of our participants. Drew commented, "We have a small staff, usually wearing multiple hats. So you know the website is kind of a sidepiece for me . . . not being able to spend time and focus on it and that sort of thing, I think, is a hindrance."

Another overarching theme across all interviews was the role of relationship building in Web content strategy practice and its connection to developing trust both with and across colleagues. Casey commented, "I think a lot of my job . . . [as] the Web manager [is] acting as a sort of liaison to my colleagues within the library. And since I had already built up a level of respect with them as a librarian myself, and then sitting with them and listening to their needs and making suggestions, it required a level of trust. And that definitely helped."

Blake described the outcome of this type of long-term relationship building as "a programmatic approach to the way we do library stuff. I feel like because we've taken that very holistic approach, and it's touched . . . almost every department, if not every department, people really understand that, and it's well integrated. There's a strong commitment to it."

Emerson made a connection between building trust within their colleague group and their own confidence in their expertise, identifying three key aspects:

- One, I think it's not being afraid to say no, or "I know because I am an expert in this area," which is hard to do sometimes because I still don't feel like an expert all the time . . .
- Two, to be able to point people to those resources that are well respected and known;
- and three, is getting more comfortable, and getting staff more comfortable, talking about design and user experience choices, giving them the vocabulary to talk about it.

Impact of COVID-19

Interviews for this project were conducted roughly 10 months into the global COVID-19 pandemic. The pandemic resulted in a sudden shift by academic libraries to support their communities through increased, and sometimes entirely, remote services. Jordan stated, "Our library website is really the key to what the library has to offer these days, and especially with COVID because all of our classes have gone online."

The authors felt it was essential to ask how the pandemic had affected participants' respective Web content strategies. All participants indicated some level of impact. Casey referred to working on the website during this period as "intense." Harper said, "We're hanging on by our fingernails." Drew and Jordan described the changes needed as "constant." Participants discussed challenges in prioritizing actions, particularly not knowing how long the circumstances leading to updates would continue, and debating

While awareness of content strategy appeared to be growing, for many, its practice remained intermittent or closely tied to a major event such as a site redesign.

whether they should rewrite content, create a parallel source of information, or make notations on relevant pages. Alex reflected that they had to learn to “live with something not being correct if everyone knows it’s a global pandemic, as long as it’s very clear this is where you get the accurate information.” Emerson specifically mentioned the impact on their main site navigation.

A focal point for some was the sheer quantity of Web content to be managed. Casey reported a new and greater emphasis on conciseness and writing for the Web, and on identifying the most important content to highlight and strengthen: “We thought that we did this before . . . we had, I think maybe 1,300 pages, and then we got down to just over 300 pages, and now we’re, like, can we have 20 pages.”

Multiple participants discussed how the pandemic highlighted the importance of robust functionality and strategy related to “alerts” or site banners, including improved technology, thoughtful deployment, and consistent styling. Frankie mentioned “banner fatigue,” noting that a persistent site alert banner, even with updated information, may not remain noticeable to returning users.

Some participants suggested that having elements of a content strategy in place aided their ability to respond effectively, with Alex commenting, “I don’t think it so much affected [our] strategy. I think it’s taught us a few things and reminded us of things that always were.” Jordan acknowledged in hindsight that the high-pressure circumstances had impacted their ability to proceed strategically: “I wish we had paused for a moment and developed a process or a plan, but unfortunately we didn’t because it was very reactive ‘Hurry up and get this information out there.’ It’s definitely brought to light how important having a more established, ongoing strategy is.”

Conclusion

Findings from these interviews with academic library practitioners demonstrate the emergence of several shared Web content strategy challenges across a wide spectrum of structures and practices. The Content Strategy Maturity Model for Academic Libraries provides a flexible tool to address these challenges, in alignment with content strategy best practices and in ways appropriate to each institution’s culture, resources, and circumstances. In contrast to more prescriptive measures, the activities described at each level of the Content Strategy Maturity Model are incremental and additive across all elements of content strategy, enabling academic libraries to more effectively evaluate the current state of their Web content strategy, facilitate conversations, identify growth opportunities, and set goals at varying levels of granularity. As a diagnostic tool, the Content Strategy Maturity Model could be employed by individuals or groups for a variety of purposes, such as strategic planning, advocacy for positions or resources, individual professional development or career planning, and individual or department goal setting.

Several participants expressed sentiments during the interviews indicating that, rather than retaining a limited focus on the website proper, they aspire to a holistic and well-articulated strategy across the entirety of the library’s Web presence, consistent with level 5 (Thriving) of the Content Strategy Maturity Model. Frankie stated: “The website is not a silver bullet . . . I feel like the website is part of a much larger ecosystem



of information about the library and its services and its culture and environment . . . I wish we always thought of the changes that we were making to the library website in that broader context, and I always try to.”

In conclusion, Glenn’s comments describe the authors’ aspirations for the model’s potential usefulness to the library Web content strategy community of practice:

All the kinds of stuff that really go into content strategy . . . it’s more than just the content, it’s all the parameters that shape making that stuff available, accessible, publishing that content, is part of that sustainability and so forth, and [the maturity model], I think, helps to craft some of that. You’re only going to get there on the content side if you have all those other pieces in place as well, in terms of really thriving as a whole information life cycle and having shared understanding across the organization of what you’re trying to accomplish.

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This mss. is peer reviewed, copy edited, and accepted for publication in Portal 22.4.



Appendix A

Correspondence with Subjects

Invitation E-Mail

This message is intended for << Full name >>

Dear << First name >>,

Thank you for participating in our recent research project “Content Strategy in Practice within Academic Libraries” (University of Colorado Boulder IRB Protocol #20-0581). An analysis of survey responses and our proposed Content Strategy Maturity Model for Academic Libraries will be published in [journal] in [date].

In your survey response, you indicated that you were willing to be contacted regarding future research projects. We are writing today to invite you to participate in our current research project, “Web Content Strategy Methods and Maturity in Academic Libraries” (University of Colorado Boulder IRB Protocol #20-0581).

We have provided the information below as a downloadable pdf should you wish to keep it for your records.

In this study, we will invite participants to discuss their work within and outside the frame of our proposed maturity model to further illustrate Web content strategy practice in academic libraries. We will ask participants to complete a short questionnaire (approximately 10 minutes) and participate in a semi-structured interview (approx. 55 minutes) via Zoom video conferencing software. If you opt to participate, we expect that your total time commitment to this research study will be approximately one hour. Interviews will be conducted in January and February 2021.

You will not be paid to be in this study. Whether or not you take part in this research is your choice. You can leave the research at any time, and it will not be held against you.

At maximum, we expect approximately 25 people to be part of this research study.

You may opt in to participating in the study by completing our preinterview questionnaire, linked below.

As part of this questionnaire, you will schedule an interview time of your choosing via a Web-based calendaring system. The e-mail confirmation of the appointment date and time will include connection information for the interview session, the interview questions, and a copy of the proposed Content Strategy Maturity Model for Academic Libraries.



Yes, I'd like to participate

No, I'm not interested.

We appreciate your willingness to be contacted. We will not contact you again.

[Unsubscribe](#)

Confidentiality

Information obtained about you for this study will be kept confidential to the extent allowed by law. Research information that identifies you may be shared with the University of Colorado Boulder Institutional Review Board (IRB) and others who are responsible for ensuring compliance with laws and regulations related to research including people on behalf of the Office for Human Research Protections. The information from this research may be published for scientific purposes; however, your identity will not be given out.

Questions

If you have questions, concerns, or complaints, or think the research has hurt you, contact the research team at [e-mail].

This research has been reviewed and approved by an IRB. You may talk to them at [e-mail] or [phone] if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

Thank you for your consideration,

[authors]

Reminder E-Mail

This message is intended for << Full name >>

Dear << First name >>,

The recruitment period for our current research project, "Web Content Strategy Methods and Maturity in Academic Libraries" (University of Colorado Boulder IRB Protocol #20-0581), will close at the end of business this Friday January 8th.

We thank you for your willingness to be contacted. This will be the last e-mail you will receive from us regarding participation in this research study.



In this study, we invite participants to discuss their work to further illustrate Web content strategy practice in academic libraries. We will ask participants to complete a short questionnaire (approximately 10 minutes) and participate in a semi-structured interview (approx. 55 minutes) via Zoom video conferencing software. If you opt to participate, we expect that your total time commitment to this research study will be approximately one hour. Interviews will be conducted in January and February 2021.

We have provided detailed information about this study, "Web Content Strategy Methods and Maturity in Academic Libraries" (University of Colorado Boulder IRB Protocol #20-0581), as a downloadable pdf should you wish to keep it for your records.

You may opt in to participating in the study by completing our preinterview questionnaire, linked below.

As part of this questionnaire, you will schedule an interview time of your choosing via a Web-based calendaring system. The e-mail confirmation of the appointment date and time will include connection information for the interview session, the interview questions, and a copy of the proposed Content Strategy Maturity Model for Academic Libraries.

Yes, I'd like to participate

No, I'm not interested.

We appreciate your willingness to be contacted. We will not contact you again.

[Unsubscribe](#)

Confidentiality

Information obtained about you for this study will be kept confidential to the extent allowed by law. Research information that identifies you may be shared with the University of Colorado Boulder Institutional Review Board (IRB) and others who are responsible for ensuring compliance with laws and regulations related to research including people on behalf of the Office for Human Research Protections. The information from this research may be published for scientific purposes; however, your identity will not be given out.

Questions

If you have questions, concerns, or complaints, or think the research has hurt you, contact the research team at [e-mail].

This research has been reviewed and approved by an IRB. You may talk to them at [e-mail] or [phone] if:



- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

Thank you for your consideration,
[authors]

Consent Document

Title of Research Study: Web Content Strategy Methods and Maturity in Academic Libraries

IRB Protocol Number: 20-0581

Investigator: Courtney McDonald

Purpose of the Study

The purpose of the study is to further illustrate Web content strategy practice in academic libraries through inviting participants to discuss their work within and outside the frame of a proposed Content Strategy Maturity Model for Academic Libraries. We will ask participants to complete a short questionnaire (approximately 10 minutes) and participate in a semi-structured interview (approx. 55 minutes) via Zoom video conferencing software.

We expect that you will be in this research study through the completion of your interview, to be conducted in January or February 2021, with a total time commitment of approximately one hour.

We expect about 25 people will be in this research study.

Explanation of Procedures

We are directly contacting individuals who, as part of previous research, indicated their willingness to be contacted for future research projects. Participants will be asked to complete a brief Web-based questionnaire followed by a semi-structured interview, conducted via Zoom video conferencing software. Interviews will be conducted in January and February 2021.

Voluntary Participation and Withdrawal

Whether or not you take part in this research is your choice. You can leave the research at any time, and it will not be held against you.

The person in charge of the research study can remove you from the research study without your approval. Possible reasons for removal include failing to appear at the agreed-upon appointment time twice consecutively, or failure to schedule an interview time prior to the completion of the study.



Confidentiality

Information obtained about you for this study will be kept confidential to the extent allowed by law. Research information that identifies you may be shared with the University of Colorado Boulder Institutional Review Board (IRB) and others who are responsible for ensuring compliance with laws and regulations related to research, including people on behalf of the Office for Human Research Protections. The information from this research may be published for scientific purposes; however, your identity will not be given out.

Payment for Participation

You will not be paid to be in this study.

Questions

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at [e-mail].

This research has been reviewed and approved by an IRB. You may talk to them at [e-mail] or [phone] if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

Signatures

In lieu of your signature, your acknowledgment of this statement in the online Web-based questionnaire documents your permission to take part in this research.

This mss. is peer reviewed, copy edited and accepted for publication, portal 22.4.



Appendix B

Preinterview Questionnaire

Web Content Strategy Methods and Maturity

Start of block: Introduction

Q1 Web Content Strategy Methods and Maturity in Academic Libraries (University of Colorado Boulder IRB Protocol #20-0581)

Purpose of the study: The purpose of the study is to gather feedback from practitioners on the proposed Content Strategy Maturity Model for Academic Libraries, and to further enhance our understanding of Web content strategy practice in academic libraries and the needs of its community of practice.

Q2 Please make a selection below, in lieu of your signature, to document that you have <link>read and understand the consent form</link> and voluntarily agree to take part in this research.

- Yes, I consent to take part in this research. (1)
- No, I do not grant my consent to take part in this research. (2)

Skip To: End of Survey If Please make a selection below, in lieu of your signature, to document that you have read and unde . . . = No, I do not grant my consent to take part in this research.

End of block: Introduction

Start of block: Demographic information

Q3 Estimated total number of employees (FTE) at your library organization:

- Less than five (12)
- 5–10 (13)
- 11–20 (14)
- 21–99 (15)
- 100–199 (16)
- 200+ (17)

Q4 Estimated number of employees with editing privileges within your primary library website:

- Less than five (12)
- 5–10 (13)
- 11–20 (14)
- 21–99 (15)
- 100–199 (16)
- 200+ (17)

Q5 Does your library have a documented Web content strategy and/or a Web content governance policy?

- No (1)
- Yes (2)

Q6 Are there position(s) within your library whose primary duties are focused on creation, management, and/or editing of Web content?

- No (1)
- Yes, including myself (2)
- Yes, not including myself (3)

End of block: Demographic information

Start of block: Web content strategy

Q7 Please indicate the degree to which each of the five elements of content strategy are currently in practice at your library.

Q8 Creation

Employ editorial workflows, consider content structure, support writing.

	Definitely true (48)	Somewhat true (49)	Somewhat false (50)	Definitely false (51)
This is currently in practice at my institution. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 Delivery

Consider findability, discoverability, and search engine optimization, plus choice of content platform or channels.

	Definitely true (48)	Somewhat true (49)	Somewhat false (50)	Definitely false (51)
This is currently in practice at my institution. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Governance

Support maintenance and life cycle of content, as well as measurement and evaluation.

	Definitely true (31)	Somewhat true (32)	Somewhat false (33)	Definitely false (34)
This is currently in practice at my institution. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q11 Planning

Use an intentional and strategic approach, including brand, style, and writing best practices.

	Definitely true (31)	Somewhat true (32)	Somewhat false (33)	Definitely false (34)
This is currently in practice at my institution. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 User Experience

Consider needs of the user to produce content that is relevant, current, clear, concise, and in context.

	Definitely true (31)	Somewhat true (32)	Somewhat false (33)	Definitely false (34)
This is currently in practice at my institution. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Please rank the elements of content strategy (as defined above) in order of their priority based on your observations of practice in your library.

_____ Creation (1)

_____ Delivery (2)

_____ Governance (3)

_____ Planning (4)

_____ User experience (5)

Q14 How would you assess the content strategy maturity of your organization?

Basic (1)

Intermediate (2)

Advanced (3)

End of block: Web content strategy

Start of block: Thank you!

Q15 Your name: _____

Q16 Thank you very much for your willingness to be interviewed as part of our research study. Prior to continuing on to finalize your survey submission, please sign up for an interview time: [link]

(This link will open in a new window to allow you to finalize and submit your survey response after scheduling an appointment)

Please contact Courtney McDonald, [e-mail], if you experience any difficulty in registering or if there is not a time available that works for your schedule.

End of block: Thank you!



Appendix C

Interview Script and Questions

Interview Script

Researcher will preset Zoom so that the participant's video is off upon entering the meeting.

Hi, [name of participant]. My name is Courtney McDonald, and myself and my research partner Heidi Burkhardt are grateful to you for giving your time to our research today.

During our 55-minute session, I will be asking you seven questions about your observations and experiences of Web content strategy practice personally and within your institution, and will ask for your comments on our proposed Content Strategy Maturity Model for Academic Libraries. We provided the questions and the model ahead of time, but I am glad to share them with you now if you would like. [wait for answer]

I will be recording this session and uploading it to Zoom Cloud for transcription. The recordings will not be shared outside the research team. Coded identifiers will be assigned to recordings to protect confidentiality. Analysis of interview transcripts will be presented as a whole. In our published research, participants will be assigned pseudonyms for any direct quotes. Data will be retained for two years following the completion of data collection; after that time, it will be destroyed.

Do you have any questions for me about our research study, the procedures we'll be following to handle the data, or about today's session?

[If yes, answer. If no, move on.]

If there are no questions, I'm going to start the recording.

[Start recording]

We are now recording. It is TIME on DATE.

Interview Questions

1. Tell us about your specific role relative to your library's primary website and broader Web content strategy.
2. How do you approach making your Web content discoverable?
3. Please describe how your library manages and develops content throughout the content life cycle.

Optional Follow-Ups

- a. What principles or documents guide your overall strategy for Web content stewardship?
 - b. How do you approach the creation of content for your primary library website?
This can include major edits to existing pages or sections.
 - c. How do you determine whether your content is meeting the goals you've set?
4. In what ways do you integrate user experience methods or practices in service of your Web content work?



5. In the view of your organization, how would you describe the role of the library website?
 - a. What is it in your view?
 - b. To what degree do these understandings overlap, or not?
6. Has the COVID-19 pandemic impacted your Web content strategy? How?
7. We shared our content strategy maturity model when scheduling this interview. We'd be very grateful to hear your overall comments or general suggestions.
 - a. Are there specific criteria or descriptors in the levels that feel inaccurate, or inappropriately placed?
 - b. At what level would you place your organization at this time?
8. Is there anything else you'd like to share today?

Thank you again for participating in our research project! I'm going to stop the recording now.

Content Strategy Maturity Model for Academic Libraries

<p>Level 1: Ad hoc No planning or governance. Creation and delivery are reactive, distributed, and potentially chaotic. No or minimal consideration of UX.</p>
<p>Level 2: Establishing Some planning and evidence of strategy, such as use of content audits and creation of a style guide; may be localized within specific groups or units. Basic coordination of content creation workflows. Delivery workflows not explicitly addressed, or remain haphazard. No or minimal organization-wide governance structures or documentation in place; may be localized within specific groups or units. Evidence of active consideration of UX in creation and structure of content.</p>
<p>Level 4: Sustaining Alignment in planning, able to respond to organizational priorities; style guidelines and best practices widely accepted. Established and accepted workflows for content creation are coordinated through a person, department, team, or other governing body. Delivery includes strategic and consistent use of channels, as well as consideration of findability. Regular and strategic evaluation occurs; proactive maintenance and retirement practices in place; managed through established governance documents and workflows. Web content strategy explicitly assigned partly or fully to a permanent position.</p>
<p>Level 5: Thriving Full life cycle of content (planning, creation, delivery, maintenance, retirement) managed in coordination across all library-authored Web content platforms. Governance established and accepted throughout the organization, including documented policies, procedures, and accountability. Basic understanding of content strategy concepts and importance across the organization. Overall stable, flexible, agile, responsive, user-centered, and focused on continuous improvement.</p>



Appendix D

Codebook

Theme	Subtheme	Definition
Planning	<i>Use an intentional and strategic approach, including brand, style, and writing best practices.</i>	
	Content calendar	Uses a content calendar for managing dynamic content (e.g., news stories that run cyclically).
	Content inventory/audit	Makes use of a formal process to inventory and/or audit all content, noting authorship, recency, etc.
	Content template/ worksheet	Uses some sort of planning template or worksheet to work through content requirements with stakeholders.
	Institutional office	There is a relationship with an institutional-level communications or Web office that has some level of oversight, control, or guidance for the design and/or content for the library website.
	Marketing/ communication	Collaborative relationship with marketing or communication department in oversight of website content strategy, or responsibility for Web content resides within respective department in library.
	Overarching strategy	Department, team, or group has responsibility of providing overarching strategy for website or Web presence.
	Style guide	Has documented standards or conventions for language, design, and branding, institutionally developed or library developed.
	Voice and tone	Has guidelines for voice and tone, or works to ensure consistent voice.
Creation	<i>Employ editorial workflows, consider content structure, support writing.</i>	
	Audience	Considers audience when planning or creating content.
	Author experience	Considers the experiences of the content editors themselves as users of the CMS [content management system] and ensuring its ease of use as a tool.

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Commitment and expertise	Recognizes that Web content creation and strategy require a certain level of commitment and expertise.
Content creation workflow	Has a workflow or process that people go through if they have an idea or a need for new content.
Content manager role	Has representatives from different areas of the organization with responsibility for managing Web content.
Minor versus major changes	Uses a process for distinguishing minor edits from more substantial changes requiring further conversation.
Stakeholder meetings	Has meetings with focused groups of stakeholders to go through content needs.
Delivery	<i>Consider findability, discoverability, and search engine optimization, plus choice of content platform or channels.</i>
Avoiding duplicative content	Avoids duplicate content as a strategy to support discoverability.
Channels	Considers where the right channel for their content to live is (for example: a LibGuide versus a page on the website).
Custom Google site search	Employs a custom Google site search on their primary website.
Information architecture	Considers the organization and structure of content on the website as a strategy to support discoverability.
Institution website	Library website is indexed in institution's website search or linked from institution's home page as part of discoverability.
Keywords	Uses keywords relative to SEO [search engine optimization] and discoverability.
Optimization for indexing	Uses methods to optimize content for crawling by search engines, such as page headings, human readable URLs.
Review search terms	Looks at search terms people use to support improving findability or content needs, or mentions using Google Search Console.
Signage	Considers the connections between Web content and physical signage, which speaks to the connection between physical and virtual.
Visitors come from Google	Acknowledges that users come to the library website from Google and it informs how they design and create content.

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Appendix Cont.

Governance	<i>Support maintenance and life cycle of content, as well as measurement and evaluation</i>	
Accessibility	Considers accessibility as part of content creation and evaluation.	
Accuracy as a measure	Spoke of accuracy as a measure of success (e.g., users or colleagues let them know when things are broken or not correct).	
Archiving used as part of content life cycle	Uses an archiving process if needed when retiring content.	
Centralized model	Very small number of people can add new website content, slightly larger group may support edits.	
Distributed model	Website editing permissions granted broadly based on role; ability to add new content may or may not be more limited.	
Google Analytics	Uses Google Analytics to collect usage data.	
Google Tag Manager	Uses Google Tag Manager specifically to collect usage data.	
Monitor things to fix	Uses a tool to monitor for things to fix such as Siteimprove or a link checker.	
Number of content creators	Any discussion about the number of people who can add content to the website.	
Governance	<i>Support maintenance and life cycle of content, as well as measurement and evaluation</i>	
Provides content guidance, no strict enforcement	Provides variety of guidelines, instructions, and support around content creation, but no strict enforcement or governance about what is and isn't published.	
Range of commitment	Experiences mix of consistency in content stewardship activity from individuals with content management responsibilities.	
Room for improvement with reviews	Not much is done with regular content reviews for things needing updates, sees as area of opportunity.	
Structured, approval-based content governance	Uses a single door for content creation and approval with an individual or centralized body who is responsible for publishing additions and changes.	



User experience	<i>Consider needs of the user to produce content that is relevant, current, clear, concise and in context.</i>	
	Best practices/heuristics	Follows established interface design best practices and heuristics (e.g., work by the Nielsen Norman Group) for making decisions.
	Personas	Uses (or has used) personas to support work on their primary website.
	Usability testing	Conducts usability testing related to content.
	User research	Conducts broader user research (e.g., surveys, focus groups, interviews, card sorting, etc.) to support efforts around content.
Overarching themes		
	Analytics are hard	Acknowledges that site usage analytics are hard to interpret respective to the specifics of academic library websites and the goals and metrics they're able to set.
	Building trust	Sees importance of building trust to having a successful Web content strategy.
Content strategy reflections during COVID-19 pandemic		
	Finding balance with ongoing updates	Thinks about where it makes sense to spend time editing versus not.
	Site alerts strategy	Recognizes need to put more thought and strategy into how website alerts are approached.
	Scaffolding	Considers when to scaffold to the latest information instead of making lots of small updates.
	Bringing more critical lens to content	Thinking critically about content has seen renewed emphasis due to pandemic. Results in creating stronger content, more emphasis on covering the essentials, or generally being more strategic.

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Notes

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