From Pathfinder to Indigenized: An Assessment of LibGuides for Indigenous Studies by ARL Member Institutions

Kristen J. Nyitray and Dana Reijerkerk

LibGuides is a popular web platform to thematically curate and promote information sources. While guides bridge curricular and research objectives to library collections, there is little discussion about Indigenizing content and design as a decolonization strategy. The study identified and evaluated 357 guides for Indigenous Studies (IS) created by members of the Association of Research Libraries (ARL). Data compiled from Springshare's LibGuides Community and ARL member webpages was analyzed for Indigenous representation, content, and user experience (UX) against a rubric of Indigenous critical pedagogical practices and protocols. The findings reveal variety in vocabulary terms to describe Indigenous peoples and subjects, organization, and topics and foci, as well as a lack of interdisciplinarity. The discussion highlights opportunities for libraries to reimagine guides as Indigenized and decolonized information sources that validate Indigenous ways of knowing.

Introduction

The historical underpinnings of Indigenous Studies (IS) and its inherent interdisciplinary nature require that library research collections account for both past and contemporary experiences of Indigenous peoples. Inspections of bias in collection management (for example, the accuracy and relevance of Library of Congress Authorities and classification schemes for Indigenous collections) have been covered in library literature.[1] Yet to be undertaken is a survey of research guides developed for IS. For more than a decade, library scholarship has considered the use and effectiveness of the LibGuides platform.[2] Only a few articles have attended to discussing guides in Indigenous contexts.[3] The present study makes a contribution to the literature with its assessment of IS guides created by Association of Research Libraries (ARL) member institutions.[4] The data for this study was compiled from Springshare's LibGuides Community[5] and ARL member web pages; it was evaluated for content and against criteria for Indigenous critical pedagogical and design practices. "Indigenous Studies" or "IS" is used in this research as an umbrella term to represent many interrelated academic fields and subfields including First Nations Studies, Métis Studies, Native American Studies, American Indian Studies, Inuit Studies, Polar Studies, and

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Hawaiian Studies. This article provides background on IS, presents an overview of LibGuides, discusses the methodology for collecting and evaluating guide content, and highlights opportunities to reimagine guides as Indigenized and decolonized information sources that validate Indigenous ways of knowing.

Background

Indigenous Studies (IS) is a distinct field of study in higher education institutions. It emerged in Canada in the 1960s and in the United States during the 1970s during a period characterized by heightened challenges to social injustices, increased antiwar sentiment, and growth of organized resistance movements.[6] According to Professor Emerita and enrolled Crow Creek Sioux tribal member Elizabeth Cook-Lynn, "a major reason for the development of Native American Studies as disciplinary work was to defend indigenous nationhood in America."[7] Of note, a call to action voiced by the Red Power movement[8] included Indigenous representation and recognition of treaty rights in higher education.[9] Today, more than 200 academic institutions in North America offer a range of programs in IS.[10] Gros Ventre legal scholar Sidner Larson commented on the uniqueness of IS programmatic contexts: "It may be helpful to distinguish American Indian studies (or, as it is termed in some places, Indigenous studies) from race, ethnic, cultural, and multicultural studies, especially as a means of emphasizing indigenous rights of self-government, land, and negotiated relations with state governments."[11] Since its inception, nuanced concentrations in regional studies have been established to reflect US and Canadian government classifications of Indigenous peoples in discrete subdisciplines, such as Hawaiian Studies and Polar Studies. Most recent US Census data finds the American Indian and Alaska Native population comprises 2.9 percent of the US population, equating to 9.7 million people.[12]

Academic libraries engage in work that Indigenizes higher education and removes access barriers to Indigenous research materials. LibGuides is a popular web platform to thematically curate and promote information sources, and to bridge curricular and research objectives to library collections.[13] For IS in particular, guides facilitate access to authoritative Indigenous knowledge and can foster collaboration with local Indigenous communities. Developed by Springshare,[14] LibGuides is a content management system designed for creating subject, topical, and course guides. These guides have largely supplanted traditional print bibliographic lists and basic pathfinders, replacing them with engaging and interactive information-gathering experiences.[15] The LibGuides platform affords guide authors with capabilities to edit in real time, embed audio and visual media, and run statistical usage reports. This library technology tool empowers librarians to dynamically produce and directly publish web pages that connect users to authoritative source materials. According to Springshare, more than 850,000 guides have been published by 6,000 institutions,[16] affirming that LibGuides has become ubiquitous.

For this assessment of IS guides, the authors focused their research questions in three thematic areas: representation, content, and UX design.

1. Representation: To what extent do ARL institutions represent Indigenous Studies (IS) in guides? Are the purposes and intentions of the guides clearly communicated?

2. Content: What words or phrases most frequently appear in assigned titles, subjects, and tags?

3. UX Design: Is there a presence of one or more of the following: decolonizing descriptions, arrangement, and organization of sources; inclusion of a land acknowledgment, local resources, and reference terminology; links to institutional Indigenous Studies (IS) programs?

Do guides align with the best practice protocols recommended in the *International Indigenous Design Charter: Protocols for Sharing Indigenous Knowledge in Professional Design Practice*?[17]

Literature Review
Indigenous and University Relations
Socioeconomic and political conditions of Indigenous peoples are uniquely intertwined with issues of sovereignty and land ownership. A rich literature chronicles the complicated histories of "Native Studies,"[18] university and tribal relations,[19] and land seizures by "land-grab universities," with the latter provoked by the US Federal Morrill Act of 1862. This act set in motion the dispossession of Indigenous peoples from their rightful lands to benefit and subsidize higher education.[20] Lee and Ahtone emphatically argued that the existence of US and Canadian universities has been predicated on buying stolen land from Indigenous communities.[21] Their extensive research confirmed that land in 24 US states was seized from Indigenous peoples in the quest to build universities; while acreage was used as land bases, it was also sold to establish self-sustaining institutional endowments. In the late 1960s, vigorous activism of the Indigenous-led Red Power Movement sought to end oppression of Indigenous peoples, attain justice, and reclaim the right to self-governance. These actions were spurred in part by the US government's 1953 resolution to terminate tribal sovereignty and force assimilation.[22]

Civil rights and related campaigns in support of the American Indian Movement (AIM) have roots in cities where early IS programs were developed such as Native American Studies (NAS) at the University of Michigan. Elizabeth Cook-Lynn's seminal article traces the complex history of IS.[23] In this important wide-ranging examination, Cook-Lynn draws attention to a pivotal event held at Princeton University in 1970 at which thought leaders collectively advocated for atoning for legacies of harm, oppression, and marginalization through higher education programs. At this gathering, a proclamation was made asserting the following: "the academic intention of U.S. colleges and universities was to use education to affect the policy of this nation in Indian affairs"; further, there was a formal directive "for the development by Indians of bodies of indigenous knowledge, and it called that development 'Native American Studies as an Academic Discipline.'"[24] In a keynote address presented years later, Cook-Lynn pointed out progress in some areas, but lamented the lack of Indigenous-directed influence in the discipline and the minimal centrality of Indigenous histories and voices in the curriculum.[25]

Decolonizing practices in academic libraries have been discussed in the areas of cataloging and classification,[26] collection development,[27] archives and special collections,[28] and information literacy.[29] Early US libraries were products of colonial collecting, a global movement to extract knowledges and resources from Indigenous communities.[30] The history of libraries is ensnared in political ideology (for example, the Library of *Congress*) and commodification of knowledge that have contributed to the absences of Indigenous peoples in collections and archival silences that persist today. Indigenous scholars often criticize decolonization work for continued exploitation of knowledge/resources under the guise of diversity and inclusion.[31] Fullmer,[32] Turner,[33] and Christen[34] have discussed decolonization opportunities in online spaces. Anderson's paper addressed Indigenous intellectual property issues, publishing, and access and use models to rebalance Indigenous cultural protocols in LIS contexts.[35]

Critical Indigenous Pedagogy in Higher Education
Grounded in social justice, Indigenous critical pedagogy is "a merger of indigenous and

critical methodologies. It understands that all inquiry is both political and moral…. It values the transformative power of indigenous, subjugated knowledges."[36] Sandy Grande observed, "Native communities continue to be affected and transformed by the forces of colonization, rendering the 'choice' of whether to employ Western research methods in the process of defining indigenous methodologies essentially moot."[37] To reconcile and reckon with their colonial pasts, universities have acted to redress their complicity in displacing and benefiting from the removal of Indigenous peoples through Indigenization. Indigenization in higher education is a movement to prioritize Indigenous ways of knowing in all aspects of higher education, including curricular programs, to better support Indigenous representation and empowerment.[38] To advance national and provincial mandates to Indigenize education curriculum, institutions are engaging in holistic institutional reform, such as the development of the teaching tool *Pulling Together: A Guide for Indigenization of Post-Secondary Institutions*[39] and *Handbook of Critical and Indigenous Methodologies*.[40] Additional examples include implementing place and context-specific Indigenous pedagogy and IS programs,[41] and recruitment and retention programs designed to increase the number of Indigenous students, faculty, and staff.

Scholars have criticized colleges and universities for not being steadfast in their actions to improve Indigenous participation and success.[42] Nakata et al. posited that IS is often too fixated on simplistic decolonization of Western knowledge and practice rather than critically engaging in complex theoretical dilemmas.[43] While many IS programs offer strong local community connections to students and faculty,[44] Luiseño/Tongva scholar Stewart-Amibo found that senior university leaders had little understanding of the institutional relationship with and cultural knowledge of local Indigenous communities.[45]

Pedagogical Considerations for LibGuides UX Design

Librarians often use LibGuides as an instructional design tool to support learning and share knowledge about discipline-specific resources.[46] Alternatively, some have questioned the connection between the use of LibGuides and pedagogy in higher education and whether the wide adoption of the tool addresses information inequity.[47] Among academic libraries, a common theme in the literature is guide effectiveness in reaching target audiences[48] and providing library services.[49] Bowen's comparison study concluded that LibGuide and web-based tutorials are equally effective tools for delivering information literacy skills and strategies.[50]

Since 2010, Springshare has released guidance to its platform users to optimize LibGuides usability and design.[51] The platform's intuitive functionality has in essence eliminated the need for guide authors to have HTML coding experience and to rely upon technology systems mediators to make guides immediately available. Creating a guide using LibGuides is facilitated by completing a brief form. Although the process is simple, each configuration decision prompts a design choice that, when combined with content selection, impacts user experience. Upon selecting the option to create a new guide, authors complete this series of steps: select a template that dictates navigation (side or top); enter a "guide name" and "description"; select the "guide type (such as subject, topic, or course)"; and decide whether or not the guide is available for indexing and reuse by community members. Associated subjects and tags and a friendly URL can also be added at this point or later. A standard LibGuide template presents customizable box structures with optional, predesigned interface elements such as drop-down lists. All guides have an accordion element positioned at the top or side that displays guide

pages and subpages as tabs. Optionally, guide creators can display the Springshare LibGuides logo, last modified date, subjects, and tags at the bottom of the webpage.

Several studies have assessed content curation and UX in LibGuides.[52] Content analysis,[53] a quantitative technique "for making replicable and valid inferences from data to their context,"[54] has been used to evaluate library websites and LibGuides.[55] The impetus is often to develop and implement a content strategy for all guides of a specific subject or topic[56] to improve the usability and findability of content.[57] Past assessments have focused on STEM[58] and digital humanities[59] subject guides. In their study of anti-Black racism guides using LibGuides and created by ARL member institutions, Piper et al. evaluated guides using a rubric based on the Hodge social justice bullet points.[60] Few institutions systematically review guides after they are published; if reviewed by guide creators, it is on an ad hoc basis.[61] UX recommendations have emerged from analyses of the adoption and application of LibGuides in academic libraries.[62] Libraries often use data from assessments of their guides to improve usability and design.[63] From a UX perspective, there is debate about the optimal position of the navigation menu, [64] design aesthetic (for example, minimalism),[65] and accessibility practices.[66] Web accessibility and usability are important considerations for academic library websites.[67] Design frameworks, such as the *Web Content Accessibility Guidelines* (WCAG),[68] usability testing,[69] and the creation of new librarian positions focused on user experience are increasingly more common. Implementation of UX principles and interpretations of the WCAG in libraries vary. Compliance with WCAG 2.0 is subjective.[70] To this point, the white paper prepared by Sims and Fiers highlights elements with some incompatibilities in standardization such as consensus on the appropriate level of detail needed for description of textual works and images.

Methodology
Defining Indigenous Guides
Indigenous guides in this study are guides with primary coverage in at least one Indigenous-focused criterion, in a North American context: inclusion of the phrase "Indigenous Studies" or "Native American Studies" in the title or description; Indigenous holidays (like Native American Heritage Month); relevant library programming; narrow Indigenous issues (for example, Dakota Access Pipeline); Indigenous communities; courses centered on Indigenous topics; and Indigenous student resources. The guide types were: general subject, course, and topic. Also included were guides that present as web pages. Excluded were guides with Indigenous-related content nested or positioned as secondary within another guide, as well as guides on themes with emphasis beyond the geographic boundaries of North America. Libraries that do not use the LibGuides platform were eliminated and not part of this research.

Data Collection Framework
Information and data were collected in December 2021. A first step in the research process was creating a shared, master Google sheet with columns corresponding to the types of information sought from each guide in support of analyzing content, UX design, themes, and Indigenous critical pedagogical practices. The use of this sheet ensured consistency in data recording and served as a conduit for communication between the authors as questions arose. Information to be gathered from each guide was organized with heading titles: Institution; Country; State or Province; Degree-granting; Indigenous Studies Program (Y or N); Program Type; Use of the LibGuides platform (Y or N); Dedicated Indigenous LibGuide (Y or N); Guide

Type (web page, topic, course, subject); URL; Title; Subject Directory; Subjects; Tags; Purpose Statement; Purpose Statement Location (header, main body, both header and main body); Last Updated; Number of Tabs; Tab Names; Librarian Assigned (Y or N); Land Acknowledgment (Y or N); Local Resources; Navigation Type (Top or Side); Reference Terminology (Y or N). A final column was assigned for free text as a place to add notes about unique features or elements of a guide.

ARL institutions were identified using ARL's membership list.[71] To locate guides, searches were performed twice for specific words and phrases and in an iterative manner: once in Springshare's LibGuides Community[72] and once in the institution's own web page or online presence for guides. Keyword searches used common variations of the word Indigenous: Native, Native American, Indian, Indigenous, Aboriginal, First Nations, and Métis. Guides yielded from these searches were added to the sheet if they met the criteria of an Indigenous guide. They were further categorized as the "subject" type if that term was used by the guide authors. A course guide could be identified by a specific reference to a corresponding course title, semester, etc. Topical guides described a narrow Indigenous issue. All other guides were deemed a web page if they did not fall into the other categories. IS programs were identified using the Association on American Indian Affairs' "Native American Studies Programs" list.[73] Canadian institutions were searched individually and for majors, minors, certificates, or concentrations.

The integration of Indigenous design centers Indigenous knowledges and cultures. The UX design assessment for this study draws from nine best-practice protocols articulated in the *International Indigenous Design Charter*.[74] The tenth protocol is implementation. The UX assessment was limited in scope to LibGuide-using ARL members who offer IS programs. If an individual member created multiple IS guides, one representative guide was selected. Crosswalks were created for mapping the protocols to practical library contexts. The machine learning tool Voyant[75] was used for textual analyses of titles, subjects, and tags assigned to guides. Finally, for each library that created a guide, a search was conducted on its corresponding institutional web page to determine if it offered a degree, minor, or certification in IS.

The Indigenizing framework for assessment of content and UX design is organized in five columns (see table 1). Each "Protocol" mirrors the 10-step best-practice protocols defined in the *International Indigenous Design Charter: Protocols for Sharing Indigenous Knowledge in Professional Design Practice*.[76] The second column, "Crosswalked Element," is a process or activity that can bridge a "Protocol" to an Indigenized guide. It provides practical examples of content and UX attributes that transform a guide from a pathfinder to an Indigenized resource. An action can be applied locally and be made incrementally.

Findings

There are 111 ARL institutions presently using the LibGuides platform. Of that subset, 87 institutions have at least one IS guide. A total of 357 Indigenous guides were identified (see table 2). The five institutions with the most IS guides are: University of British Columbia (26); University of Hawai'i at Mānoa (18); University of New Mexico (17); University of Toronto (17); and University of Washington (16). The Library of Congress has produced 12 guides. Of note, 63 percent of guides include a purpose statement that clearly articulates the intention and scope of the guide. The study also considered connections between the presence of a guide and the curriculum, and found that 72 ARL institutions offer a degree, concentration, or certification in IS.

TABLE 1				
Indigenizing Framework for Assessment of Content and UX Design of IS Guides				
Protocol	**Crosswalked Element**	**Indigenized Action**	**Indigenized Content**	**Indigenized UX Attributes**
Indigenous led	Assigned librarian	Identifies a librarian liaison to engage with the local Indigenous community	Includes the contact information for the library liaison	Contact information is visible next to the liaison name
		Encourages researchers to directly contact Tribal Nations as authoritative sources	Includes contact information for local Tribal Historic Preservation Officers and/or tribal archive	Labels each tribe and contact clearly; contacts should be positioned near the library liaison contact
Self-determined	Land acknowledgment	Acknowledges all communities regardless of federal or state recognition status	Includes a background and/or sources about land history over time	Integrates graphic or link to a visual representation of land bases
	Decolonizing descriptions, arrangement, and organization of sources	References, acknowledges, and integrates local Indigenous protocols	Assesses and improves existing vocabularies and classification schemes; eliminates inaccurate and culturally offensive terms	Lists the names that local Indigenous groups prefer and use themselves
Community specific	Local resources	Promotes local Indigenous community expertise and histories to academic departments	Adds links to official tribal government websites and local collecting institutions	Includes a list of Indigenous-led projects
			Includes links to significant local archeological or mound sites	Provides context for significant local archeological or mound sites
Deep listening	Tone and voice	Written with a tone of Indigenous self-determinism	Uses terminology that respects sovereignty and cultural viewpoints	Includes words like "resilience," "sovereignty"
			Consults style guides, such as the Government of British Columbia's *Writing Guide for Indigenous Content*[77]	Capitalizes the word "Indigenous" and the names of tribes/peoples

TABLE 1				
Indigenizing Framework for Assessment of Content and UX Design of IS Guides				
Protocol	**Crosswalked Element**	**Indigenized Action**	**Indigenized Content**	**Indigenized UX Attributes**
Indigenous knowledge	Reference terminology	Facilitates library research by providing a selection of keyword search recommendations	Provides lists of LC Authorities and classifications for searching collections	Creates a table to visually communicate names and variants
			Provides historical name and spelling variations for local Indigenous communities	Indicates historical or contemporary usage of terms with styling and font
Shared knowledge (collaboration, co-creation, procurement)	Authored with local community	Collaborates and consults with Indigenous communities or community representatives	Designs accountability mechanisms and solicit public feedback	Includes language inviting critique by Indigenous groups and students
	Links to institutional IS programs	Facilitates reciprocal representation on academic websites; encourages collaboration with academic department faculty and students	Embeds guides in syllabi and curricular resources	Includes a tab dedicated to the IS program (if relevant)
Shared benefits	Indigenous methodology	Fosters competencies in relevant methodological approaches and techniques in IS	Includes relevant Indigenous cultural protocols to follow	Adds links to *Protocols for Native American Archival Materials* (PNAAM)[78] and other sources for guidance on using Indigenous materials in research and writing
			Gives scholarly credit to traditional knowledge keepers and elders	Gives example citations for elder knowledge

TABLE 1
Indigenizing Framework for Assessment of Content and UX Design of IS Guides

Protocol	Crosswalked Element	Indigenized Action	Indigenized Content	Indigenized UX Attributes
Impact of design	Inclusion of Indigenous language; reference terminology	Demonstrates cultural responsiveness	Refers to communities with the names they call themselves; query communities for proper name pronunciations; link to official and social media presences of communities	Titles guide tabs and sections in a relevant Indigenous language
				Positions Indigenous authored content at the top of guide sections or boxes
				Communicates greetings in a local Indigenous language
Legal and moral	Indian Law; treaties; elder knowledge; citation style; rights and permissions	References content about relevant treaties, laws, public policy	Names the local treaty and who signed it	Includes the local treaty in the land acknowledgment (if applicable)
		Consults and includes Indigenous citation guides	Provides templates for citing Indigenous knowledge[79]	Positions Indigenous citation styles at the top of boxes

TABLE 2
Indigenous Studies (IS) Guide Representation by ARL Member Institutions

Element	US Total (108 members)	Canada Total (16 members)	Combined Totals	Percentage
Number of IS guides	250	107	357	70% US; 30% Canada
Number of members with IS guides	75	12	87	78% (US and Canada)
Inclusion of guide purpose statement in IS guides	139	85	224	63% (US and Canada)
Number of members with IS guides and parent institution offers an IS program	57	15	72	83% (US and Canada)
Number of members with no IS guide	22	0	22	20% (US and Canada)

Table 3 shows the results of performing textual analyses for guide titles, subjects, and tags using Voyant. The word "Indigenous" appeared as a top-three term in each category. In all three categories, five of the top 10 words appear: Indigenous; American; Native; studies; and history. The most common assigned subjects and tags are the words Indigenous, American, and Native. Many tags use an underscore to separate words in phrases. The most frequently

TABLE 3
Frequency of Words and Phrases in Indigenous Studies (IS) Guides Created by ARL Institutional Members

Element	Top 10 Words	Top 5 Phrases
Title	Indigenous (132); American (102); Native (88); studies (71); Indian (37); resources (29); history (28); guide (21); peoples (18); research (18)	Native American (68); Indigenous studies (33); Indigenous Peoples (12); First Nations (11); North America (9)
Subjects	studies (190); American (68); Indigenous (63); history (59); Native (35); Nations (26); education (23); ethnic (22); law (22); anthropology (19)	Indigenous studies (54); American studies (36); First Nations (26); ethnic studies (17); social sciences (8)
Tags	Indigenous (100); Native (56); studies (51); American (43); Aboriginal (37); peoples (24); history (23); Nations (20); Americans (18); law (16)	Indigenous studies (21); Native American (21); First Nations (17); Native Americans (16); Indigenous Peoples (13); Native Peoples (10)

selected subjects are: Indigenous studies; American studies; First Nations; ethnic studies; and social sciences. Interestingly, despite the persistence of "Indian" in Library of Congress subject headings for library cataloging purposes (such as Indians of North America), the word "Indian" only appeared in the top 10 of the title category.

Table 4 focuses on the findings of the UX design assessment using nine of the 10 protocols delineated by the *International Indigenous Design Charter*.[80] The crosswalked elements are examples of how the protocols can be actualized in libraries. Of the 72 ARL member institutions that offer IS programs, 66 use LibGuides. There are six guides dedicated to a local Indigenous community. Titles of topical guides include the University of British Columbia's "Missing and Murdered Indigenous Women, Girls, & Two-Spirit (MMIWG2S)"[81] and the University of Kansas Libraries' "Standing Rock Teach-In."[82] A land acknowledgment was included in 42 guides, one was co-authored with Indigenous community representatives, and 119 described local resources. A theme found in guides curated by Canadian ARL member institutions is emphasis on historical and traumatic events such as residential schools and stolen lands. This was determined through analysis of guide purpose statements. References to treaties and law were included in 49 guides and primarily from Canadian institutions. An Indigenous-led tone and voice were present in 57 guides.

TABLE 4
Rubric and Results of the 66 ARL Members with Indigenous Studies (IS) Guides at Institutions with IS Programs

Protocols	Protocol Definition[83]	Crosswalked Element	Member-level Total
Indigenous led	Ensure Indigenous stakeholders oversee creative development and the design process.	Assigned librarian	49 institutions (161 guides)
Self-determined	Respect the rights of Indigenous peoples to determine the application of traditional knowledge and representation of their culture in design practice.	Land acknowledgment	18 institutions (42 guides)
		Decolonizing descriptions, arrangement, and organization of sources	26 institutions (50 guides)

TABLE 4 **Rubric and Results of the 66 ARL Members with Indigenous Studies (IS) Guides at Institutions with IS Programs**
Protocols	**Protocol Definition**[83]	**Crosswalked Element**	**Member-level Total**
Community specific	Ensure respect for the diversity of Indigenous culture by acknowledging and following regional cultural understandings.	Local resources	37 institutions (119 guides)
Deep listening	Ensure respectful, culturally specific, personal engagement behaviors for effective communication and courteous interaction. Make sure to be inclusive and ensure that recognized custodians are actively involved and consulted.	Tone and voice	20 institutions (57 guides)
Indigenous knowledge	Acknowledge and respect the rich cultural history of Indigenous knowledge including designs, stories, sustainability and land management, with the understanding that ownership of knowledge must remain with the Indigenous custodians.	Reference terminology	26 institutions (50 guides)
Shared knowledge (collaboration, co-creation, procurement)	Cultivate respectful, culturally specific, personal engagement behaviors for effective communication. This involves courteous interactions to encourage the transmission of shared knowledge by developing a cultural competency framework to remain aware of Indigenous cultural realities.	Authored with local community	1 institution (1 guide)
		Links to institutional IS programs	21 institutions (57 guides)
Shared benefits	Ensure Indigenous people share in the benefits from the use of their cultural knowledge, especially where it is being commercially applied.	Indigenous methodology	21 institutions (57 guides)
Impact of design	Consider the reception and implication of all designs so that they protect the environment, are sustainable, and remain respectful of Indigenous cultures over deep time: past, present, and future.	Inclusion of Indigenous language; reference terminology	34 institutions (104 guides)
Legal and moral	Demonstrate respect and honor cultural ownership and intellectual property rights, including moral rights, by obtaining appropriate permissions where required.	Indian Law; treaties; elder knowledge; citation style; rights and permissions	29 institutions (49 guides)

Discussion

LibGuides as a platform offers librarians opportunities to easily design engaging, informative guides for academic disciplines. Despite its ubiquity, ARL member libraries are not fully using the tool's enhanced web design and website creation capabilities. The platform is minimally integrated with existing library web infrastructure and branding. Often, few cues communicate that the guide is part of a library's website, as institutional branding is often absent in the LibGuide format. Further, it was challenging to locate landing pages for guides when navigating from within the institution's own homepage. The guide type (subject, topic, course, and so on) was not commonly defined. Many guides function as a pathfinder for general IS content, whereas others operate as web pages, and promote associated services for IS and Indigenous students.

IS guides exhibit variability across and within ARL member institutions in representation, content, and UX design: use and input of template fields, organization, topics and foci, and extent of interdisciplinarity. The ease of creating guides and local control for customized appearances benefits guide creators. Steps to improve user interactions with guides include defining terminology, stating objectives, and branding appearances consistently to reduce unintentional barriers to content discoverability. Overall, presentation of information and library resources for social justice and related issues frequently omits context. Of note, most land acknowledgments lack historical background about the land itself. Guides could direct users to sources on the peoples, geographies, treaties, and acts of dispossession influencing land ownership over time.

The practice of highlighting licensed resources as "top picks" or categorizing library materials by format rather than by subject presents incompatibilities with inquiry-based learning.[84] This method is culturally remote and counter to Indigenous epistemological approaches.[85] As Pedaste et al. point out, "inquiry-based learning is not a prescribed, uniform linear process. Connections between the phases may vary depending on the context."[86] This argument has particular relevance to designing guides based on inclusion of Indigenous ways of knowing, which honor the relationships among all sources of knowledge and does not privilege one over the other.

There was little indication that Indigenous values and collaborations with local communities informed the structure, arrangement, and content selection. Privileging Critical Indigenous Pedagogy (CIP) as described in *Handbook of Critical and Indigenous Methodologies*[87] can support enlarging these processes. CIP is characterized as "ethical, performative, healing, transformative, decolonizing, and participatory" so as to generate dialogue with a community that acknowledges self-determination and cultural autonomy of Indigenous peoples.[88] Further, Cree-Métis scholar and librarian Jessie Loyer argues, "Indigenization must go beyond beautifying the place or engaging in more accountable collection development; instead, it must make room for Indigenous ways of knowing, while recognizing that Indigenous knowledge has been systematically discredited by academia."[89]

Limitations and Further Research

The data collection process required that searches be performed in both Springshare's LibGuide Community and each library website. While the authors were careful to identify all guides by keyword, it is possible that some guides positioned out of context were not counted. The lack of standardization in guide-type categories, specifically "subject" and "topic," could have in-

advertently affected how guides were recorded. Libraries do not always differentiate between these two types or define them. Further complicating this issue was a lack of hierarchy in guide organization. For example, many libraries simply list guides alphabetically or nest them under another heading such as "American Studies." The University of British Columbia has a landing page titled "List of all Xwi7xwa Research Guides" that includes links to "Additional Indigenous Research Guides at UBC" and an A-to-Z list of "UBC Library Indigenous Research Guides." A homepage of this type aids identification of all guides under umbrella headings.

This research was limited to ARL member institutions. Future research could enlarge the scope to include non-ARL libraries, library systems, and non-LibGuide sites, as not all libraries can afford or have access to the platform. Another area of consideration is guides created outside the geographic boundaries of North America. The study did not consider the selection of information sources in the typical categories of databases, e-journals, books, and the like. Preliminary assessments suggest many of the same resources were selected across institutions, and a review would not confirm or reject any conclusive results. Finally, a usability study of guides from the perspective of information seekers would provide insights on how they navigate and interact with guides for IS.

Conclusion

Research guides can be more than pathfinders or lists. Libraries can reimagine guides as Indigenized, decolonized information sources to validate Indigenous ways of knowing. A majority of institutions using the LibGuides content management system have produced guides for IS. Enhancements can be made to them by adding: controlled or defined vocabularies; expressions of scopes and purposes; assignments of librarians; and intuitive positioning on library websites. To increase awareness and accessibility, IS guides should strive to maintain currency, present both past and contemporary histories in proper contexts, and be embedded in curricular materials. In guide development, protocols and pedagogical frameworks can be integrated to center Indigenous knowledge and UX design principles in the arrangement, selection, and presentation of library resources. The authors devised emulatable methods to holistically evaluate IS guides. The themes articulated in the framework and rubric offer an inspirational framework for research guides and UX design that works toward the goal of actualizing Indigenous self-determination.

Notes

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