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## Ubiquitous LibGuides: Variations in Presence, Production, Application, and Convention

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C. Neuhaus, A. Cox, A. M. Gruber, J. Kelly, H. Koh, C. Bowling  
and G. Bunz

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# Ubiquitous LibGuides: Variations in Presence, Production, Application, and Convention

C. Neuhaus, A. Cox, A. M. Gruber, J. Kelly, H. Koh, C. Bowling and G. Bunz

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## ABSTRACT

The LibGuides platform, a content management system (CMS) from Springshare, has become an integral part of the online presence for many academic libraries. Neither Springshare nor other recent studies have provided an in-depth look at the evolving nature of LibGuides adoption, production and application across university and college categories. This study compared the prevalence and production of LibGuides to other forms of library guides at 799 academic libraries throughout the United States. LibGuides naming conventions were recorded and compared. The use of LibGuides CMS software to create library websites was also documented. This study found that there are clear differences in LibGuides adoption and production across various types of institutions. LibGuides naming conventions were fairly consistent across all types of institutions. Institutions using LibGuides software produced substantially more library guides than institutions without this software. A small but significant portion of all non-R1 libraries in this study are now utilizing LibGuides software to create the majority of their library websites.

## KEYWORDS

Associate's Colleges; Baccalaureate Colleges; Carnegie Classification; college libraries; Doctoral Universities; LibGuides; library guides; Master's Colleges & Universities; Springshare; university libraries

## Introduction

LibGuides, Springshare's content management system (CMS), is a widely-adopted platform in academic libraries. Springshare (2021c, para. 1) bills LibGuides as "the most popular, easiest to use web publishing and content curation platform for libraries." The company reports that more than 6,000 libraries of all types use their services (Springshare, 2021a). There are many factors that may account for its popularity, including the platform's flexibility and ease of use for librarians. Despite the widespread use of LibGuides, there is limited research documenting differences in LibGuides adoption in academia. This study seeks to provide a deeper and more nuanced understanding of where and how this popular library resource is being implemented.

40 A review of the literature shows several relevant studies, but a consid-  
41 eration of the academic LibGuides landscape could go much deeper and  
42 broader. To date, few, if any, studies have documented library guide naming  
43 conventions or the relative type and number of libraries using LibGuides  
44 software to design their primary websites. While Springshare offers a  
45 dashboard for gathering certain statistics (2021c), neither Springshare nor  
46 previous studies provide an extensive look at the LibGuides ecosystem in  
47 academia across a variety of institution types. This study attempts to more  
48 thoroughly delineate and describe the current world of academic LibGuides  
49 by examining the following five questions:

50 Q1. How many of the libraries in this study offer web-based library guides?  
51

52 Q2. How many libraries use LibGuides software to build their web-based library  
53 guides?  
54

55 Q3. Is there a difference between the average number of library guides produced  
56 by libraries using LibGuides software, and the average number of guides created  
57 by libraries using other software systems?

58 Q4. To what extent are libraries using LibGuides to design and build the majority  
59 of their library websites and does this differ by type of academic institution?

60 Q5. What are the primary naming conventions for LibGuides across different types  
61 of academic institutions?  
62

## 63 **Literature review**

64 While this study examines and describes the continued growth and  
65 distribution of LibGuides and LibGuides CMS, a brief review of the  
66 library research also provides a sense of the ubiquity of LibGuides, not  
67 just in cyberspace, but in the literature as well. Articles on LibGuides  
68 are abundant. A title search for “LibGuides” in the database Library  
69 Literature & Information Science Full Text uncovers over 100 articles,  
70 while the search “intitle:LibGuides” in Google Scholar yields over 6,000  
71 results with over 100 results published since 2020. LibGuides literature  
72 spans a wide variety of topics with particular emphasis on accessibility,  
73 design and customization, usability testing, use patterns, and user expe-  
74 rience (UX).  
75

76 Articles that focus on LibGuides design and usability are well represented  
77 in the literature. In their LibGuides usability tests, Sonstebly and DeJonghe  
78 (2013) found that study participants objected to guides with too many  
79 tabs, describing pages as either “cluttered” or “busy.” Yelton (2015) pointed  
80 to side navigation as a way to declutter a website with too many tabs.  
81 Ouellette (2011) shared that students found a left-side navigation menu  
82 to be “cleaner” and more “modern.” Thorngate and Hoden (2016) found

83 that clutter was an impediment to navigation and that students using side  
84 navigation outperformed those using horizontal tabbed navigation on  
85 various performance tasks. Conerton and Goldenstein (2017) found stu-  
86 dents preferred guides that required minimal scrolling and contained less  
87 text. Lee and Lowe (2018) found that students had a more positive expe-  
88 rience when working with “pedagogical-style” LibGuides that were tied to  
89 the research process rather than a variety of information formats. Barker  
90 and Hoffman (2021) also observed student preferences for side navigation,  
91 decluttered library guides, and guides focused on research processes rather  
92 than resource types.

93 Usability research, pedagogical principles, and practitioner advice on  
94 library guide layouts and formats have been synthesized and published  
95 as best practices in LibGuides design. Gonzalez and Westbrook (2010)  
96 advocated for a set of design principles based on a review of the litera-  
97 ture, feedback from users, and LibGuides use. Bergstrom-Lynch (2019)  
98 recently compiled sets of best practices based on both user studies and  
99 instructional design principles. Using an extensive literature review,  
100 Goodsett et al. (2020) derived a table of LibGuides best practices that  
101 focuses on the six categories of design, navigation, content, accessibility,  
102 purpose, and external factors which in turn are subdivided into 30 spe-  
103 cific best practices. Both Shotick (2016) and Skaggs (2016) provide advice  
104 for designing LibGuides that are accessible to users with visual, mobility,  
105 and hearing impairments. Pionke and Manson (2018) note that accessi-  
106 bility is a priority with Springshare, that LibGuides offers many accessi-  
107 bility prompts and features to LibGuide authors, and that the Springshare  
108 blog (<https://blog.springshare.com/>) regularly features updates and advice  
109 on making LibGuides more accessible. Despite this, a number of authors  
110 caution LibGuides designers to enhance features for accessibility when  
111 needed (e.g., adding alternative text to images) and to take advantage of  
112 Springshare support (Magnuson, 2015; Pionke & Manson, 2018). More  
113 recently Chee and Weaver (2021) and Hooper (2021) focused on the  
114 necessary steps to be taken to help LibGuides comply with the interna-  
115 tional accessibility standards specified by the W3C consortium’s Web  
116 Content Accessibility Guidelines (WCAG).

117 Though much attention has been devoted to LibGuides design and  
118 testing, there have also been studies that measured the impact and efficacy  
119 of LibGuides on their intended audience. Bowen (2014) compared the  
120 relative effectiveness of both web tutorials and LibGuides to successfully  
121 present information literacy concepts to students in a communications  
122 course. Both the group using web tutorials and the group using LibGuides  
123 improved their ability to search for articles and books and to differentiate  
124 between scholarly and non-scholarly sources.

125

126 LibGuides may also be having a positive fiscal impact as they are now  
127 being promoted as a logical platform for quickly organizing and delivering  
128 open educational resources (OERs) to time-strapped faculty and cash-  
129 strapped students. Recent librarian initiatives to deliver OERs via LibGuides  
130 to specific student audiences appear to be meeting with success (Cannon-  
131 Rech & Mortimore, 2020; Mortimore et al., 2020; Stevens, 2018). A recent  
132 study by Hicks et al. (2021) measured the possible role LibGuides play in  
133 promoting the use of books. This study showed statistically significant  
134 positive correlations between the use of LibGuides and the use of electronic  
135 books and the checkouts of print books. To encourage qualitative input  
136 regarding LibGuides impact, Pionke and Manson (2018) emphasized the  
137 importance of including a “suggestions and comments” option that allows  
138 users to provide feedback that can be used by LibGuides authors to  
139 improve the content and functionality of library guides over time.

140 Regarding the adoption of LibGuides by academic libraries, some of  
141 the earliest research was conducted by Ghaphery and White (2012), who  
142 found that LibGuides software was already used by 68% of Association  
143 of Research Libraries (ARL) libraries in 2011. Jackson and Stacy-Bates  
144 (2016) reported similar findings, noting that 72% of the ARL libraries  
145 they reviewed between 2011 and 2013 were using LibGuides software. In  
146 their 2014 survey of LibGuides adoption in ARL libraries, Hernandez  
147 Linares and Johnson (2016) found that 80% of ARL libraries were using  
148 LibGuides. In their study of the adoption of Web 2.0 tools by community  
149 colleges, Blummer and Kenton (2014) found that 78% of the 100 schools  
150 in their study offered LibGuides and that a number of the libraries studied  
151 used LibGuides as the platform for their websites. Internationally, a more  
152 recent survey by Bangani and Tshetsha (2019) found that roughly 70% of  
153 the public universities in South Africa were offering LibGuides to their  
154 communities. Recent data from Springshare suggests that there is even  
155 more widespread adoption of LibGuides and other Springshare software  
156 products (2021a).

157 While Springshare LibGuides has grown in popularity as a solution to  
158 hosting online library guides, LibGuides CMS has also slowly gained  
159 ground with those who found this to be an affordable and easy-to-use  
160 alternative for building and maintaining entire library websites (Ismail,  
161 2012; Verbit & Kline, 2011). LibGuides CMS is a website management  
162 platform that provides additional options beyond the basic Springshare  
163 LibGuides package. One facet of LibGuides CMS is “LibGuides Groups,”  
164 a feature that allows libraries to customize subsets of LibGuides for specific  
165 groups and users. LibGuides Groups can also allow libraries to provide  
166 specific groups and users within the library community with the ability  
167 to create and design their own LibGuides (Hoffner & Osuna-Garcia, 2020;  
168

169 SpringShare, 2021h). LibGuides CMS provides library subscribers with  
170 more sophisticated API (Application Programming Interface), CSS  
171 (Cascading Style Sheets), and JS (JavaScript) programming options as well  
172 as an LTI (Learning Tools Interoperability) App to allow greater coordi-  
173 nation with a variety of courseware packages such as Blackboard, Canvas,  
174 and Moodle. The LibGuides CMS package allows libraries to create staff  
175 intranets and, of particular relevance for this study, design library websites  
176 (SpringShare, 2021h). Arguments for utilizing LibGuides CMS to design  
177 library websites include affordability, consistency, ease-of-maintenance,  
178 flexibility, membership in a large resource-sharing community, mobile-  
179 friendly format, positive user feedback, statistical features, and the ability  
180 to create a website without a large staff well versed in HTML and CSS  
181 (Desmarais & Louderback, 2020; Enis, 2017; Libby & Yaeger, 2017;  
182 Springshare, 2021e; Van Cleve, 2018).

183 Connell (2013) surveyed 265 research-level, Master's-level, and  
184 Baccalaureate-level academic libraries to determine if they were using a  
185 CMS to build and manage their library websites, and if so, what types of  
186 CMS they were using. Connell discovered that 64% of the libraries were  
187 using a CMS and that 5% were using LibGuides CMS. Seven different  
188 CMSs were noted by the respondents, with LibGuides CMS rated highest  
189 in satisfaction. While Connell found that utilization of CMSs by libraries  
190 was increasing, a number of libraries reported moving to a campus-wide  
191 mandated system that was not of their choosing.

192 Libraries and library professional organizations are now encouraging  
193 even more libraries to consider migrating their websites to LibGuides  
194 Content Management System (PANI, 2021). In an interview, Springshare  
195 CEO and inventor of LibGuides Slaven Zivkovic succinctly summarized  
196 this trend stating “We understand that LibGuides is not thought of as a  
197 website platform but we are working hard to dispel that notion and con-  
198 vince our libraries that they can host a very effective, affordable—and  
199 scalable—website using our LibGuides CMS platform” (Whitmer, 2017,  
200 p. 287).

201 Librarians have been creating public lists and descriptions of recom-  
202 mended library resources since at least the 1950s (Vileno, 2007), though  
203 some would argue that librarian-crafted bibliographies and book lists of  
204 the late 19th and early 20th centuries were the first precursors of the  
205 modern library guide (Smith, 2008). In 1972, Canfield and Stevens intro-  
206 duced what might be considered the original “library guide” in the form  
207 of a one-page print “Library Pathfinder” (Canfield, 1972). The purpose of  
208 the Library Pathfinder was to serve as “a compact guide to the user’s basic  
209 information needs” (Stevens et al., 1973, p. 41). Jarvis (1985) found that  
210 pathfinders went by many different names including “library handouts,”  
211



212 “bibliographic guides,” and “LC Tracer Bullets.” To increase visibility and  
213 to overcome the possible ambiguity of these various pathfinder labels,  
214 Jarvis encouraged libraries to host their pathfinders in online public access  
215 catalogs (OPACs) where they might be linked to the material to which  
216 they referred. With the development of web-linked search technologies  
217 Gopher and Veronica in the early 1990s, followed quickly by the explosive  
218 growth of the World Wide Web, librarians began moving their pathfinders  
219 and library guides to the internet to guide patrons to relevant library and  
220 internet resources and to provide a ready platform for bibliographic  
221 instruction (Diaz, 1998; Laverty, 1997; Schankman, 1994; Sloan, 1996).

222 In a 2002 study of 48 online business “pathfinders” at 20 Canadian and  
223 U.S. universities, Dunsmore discovered that there was a wide variety of  
224 names used to describe the library guides under consideration. The most  
225 prevalent keywords found in guide names were “research,” “subject,” and  
226 “guides,” however, none of these business guides used the term “pathfinder.”  
227 To overcome the inconsistencies in naming library guides, and to prevent  
228 potential patron confusion, Dunsmore argued for the name “subject guide.”

229 In response to their 2003 usability study, which showed that undergrad-  
230 uate students seldom used “subject guides,” the University of Rochester  
231 created the CoURse Resources System. This software allowed librarians to  
232 quickly create “course guides” that focused on the specific requirements  
233 of a particular course and thus might offer resources that proved more  
234 relevant to the students taking that course (Reeb & Gibbons, 2004).

235 In 2009, a LibGuides Usability Task Force from the University of Michigan  
236 asked 16 students to choose three preferred names from a list of 15 possible  
237 library guide names (that did not include “LibGuides” as an option) and to  
238 indicate which of the names they disliked. The favorites included “Recommended  
239 Resources,” “Research Resources,” and “Research Guides.” The most disliked  
240 names included “Cheat Sheets” and “MGuides” (Beaton et al., 2009).

241 In a 2010 study, Morris and Del Bosque studied the library guides of  
242 the 21 academic libraries of the Mountain West and Big 12 Athletic  
243 Conferences. They found that collectively these libraries used a variety of  
244 names for these guides. Fourteen libraries used two or more names for  
245 library guides and, in some instances, the same library guide was referred  
246 to by more than one guide-naming convention. The two most common  
247 names were “Subject Guide” and “Research Guide,” though more complex  
248 combinations of these names were also discovered, such as “Research and  
249 Subject Guides.” In total, the authors found there were 27 different guide  
250 names being used by these 21 libraries.

251 In their 2015 case study of LibGuides implementation at the University  
252 of Saskatchewan, Duncan, Lucky, and McLean noted that while the liter-  
253 ature often refers to Springshare LibGuides as “LibGuides,” they argued  
254

255 against listing library guides under this potentially ambiguous heading.  
256 LibGuides usability testing at the University of Alabama found that most  
257 students preferred the context relevant name “Research Guides” to the  
258 label LibGuides that was currently being used (Quintel, 2016).

## 259 **Methods**

260  
261 In 2019, this study sought to evaluate the use of LibGuides among a large  
262 yet manageable set of distinct academic library populations. Colleges and  
263 universities from within the United States were chosen from four of the 33  
264 Carnegie “Basic classification” categories arrayed under the 2019 Carnegie  
265 Standard Listings. While no two academic institutions are exactly alike, the  
266 Carnegie Classification System attempts to categorize similar schools based,  
267 in part, on the type and number of degrees awarded, research focus, enroll-  
268 ment, graduate-to-undergraduate ratios, and the nature of student residence  
269 on- or off-campus (Indiana University Center for Postsecondary Research,  
270 2018). The “Basic classification” categories selected for this study included  
271 “M1: Master’s Colleges & Universities: Larger Programs,” which is the category  
272 to which the researchers’ home institution belonged; and “R1: Doctoral  
273 Universities—Very high research activity,” which includes the majority of  
274 Association of Research Libraries (ARL) members. Baccalaureate-level and  
275 Associate’s-level categories were also chosen to provide a broad array of insti-  
276 tutions for this study. The Baccalaureate and Associate’s-level categories were  
277 chosen for their high concentration of institutions from the researchers’ state  
278 library organization. This generated an initial sample set of 834 institutions:  
279

- 280 • 132 universities from the category “R1: Doctoral Universities—Very  
281 High Research Activity.”
- 282 • 351 universities from the category “M1: Master’s Colleges &  
283 Universities—Larger Programs.”
- 284 • 241 colleges from the category “Baccalaureate Colleges: Arts &  
285 Sciences Focus.”
- 286 • 112 colleges from the category “Associate’s Colleges: Mixed Transfer/  
287 Career & Technical-High Traditional.”

288  
289 Each institution in the study was then analyzed to determine if there  
290 was a publicly accessible library website that provided library resources  
291 independent from other institutions. Institutions listed in the four chosen  
292 Carnegie categories were excluded from this study if:  
293

- 294 • the institution did not offer a library website;
  - 295 • the institution only allowed enrolled students access to the library  
296 website via password;
- 297

- the institution was not clearly the primary author or owner of web-based library guides that appeared to be shared among other member institutions of an online consortial library; or
- the institution was a satellite campus of a larger parent organization and only offered web-based library guides that appeared to have been created or managed by that parent organization.

Of the initial 834 institutions selected, 17 Master's-level institutions, 18 Baccalaureate-level institutions, and two Associate's-level institutions were dropped for one or more of the conditions listed above. This left a study sample of 132 Doctoral-level institutions, 334 Master's-level institutions, 223 Baccalaureate-level institutions, and 110 Associate's-level institutions, for a total of 799 institutions.

For each of these 799 institutions, the primary library website was then located and the following five data points were recorded:

- number of library guides listed (LibGuides or other web-based library guides);
- whether Springshare LibGuides software was used to create the library guides;
- whether Springshare LibGuides software or LibGuides CMS software was used to create the library website—based upon either the presence of the word “libguides” in the URL of the guide or website, or the presence of a “Login to LibApps” access point at the bottom of the guide or website; and
- the name or names used to link to these guides from the library homepage or to describe these guides in the title of each library's primary library guide directory page (and exclusive of other names listed under “Type” by libraries using the LibGuides “Type” categorization).

## Results

The most salient and immediate finding of this study is the confirmation of the prevalence of web-based library guides at American academic libraries and, more specifically, the predominance of Springshare's LibGuides platform. Of the 799 academic libraries analyzed by this study, 727 (n=91.0%) offered web-based library guides, of which 655 (n=82.0%) offered LibGuides. Of the 727 academic libraries offering web-based library guides, 678 (n=84.9%) libraries either posted the total number of guides they offered or provided a ready means for tallying this total. Collectively, these 678 academic libraries offered 102,609 web-based library guides. All Doctoral-level institutions, 98% of Master's-level institutions, and 87% of Baccalaureate-level institutions, and 67% of Associate's-level institutions in

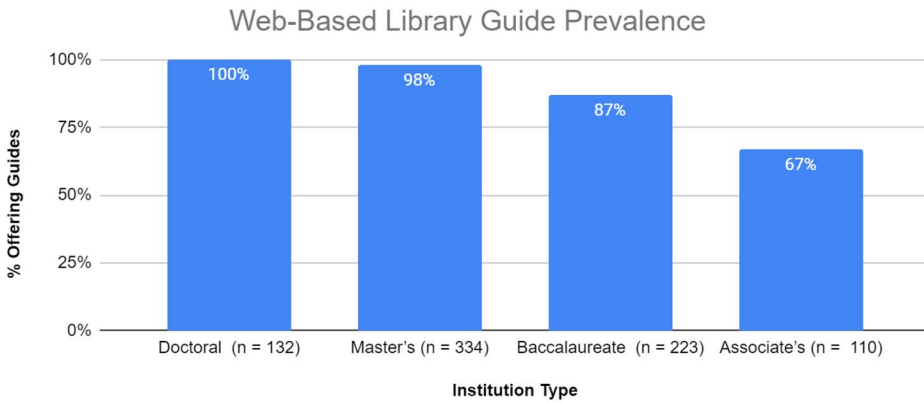


Figure 1. Prevalence of web-based library guides.

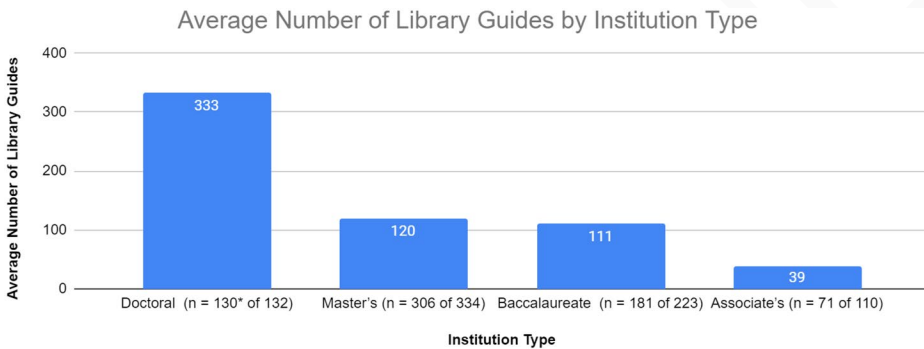
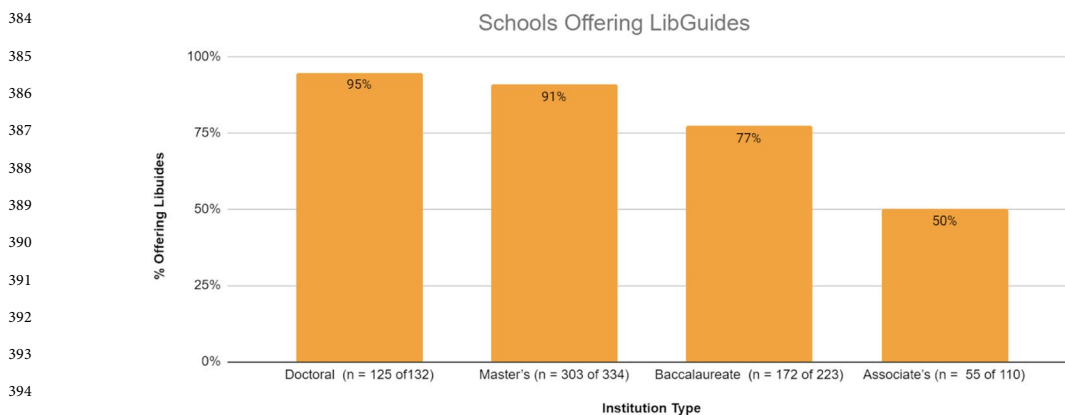


Figure 2. Mean number of library guides by institution type. \*n=number of schools that listed the total number of guides publicly available or provided a means for computing this number.

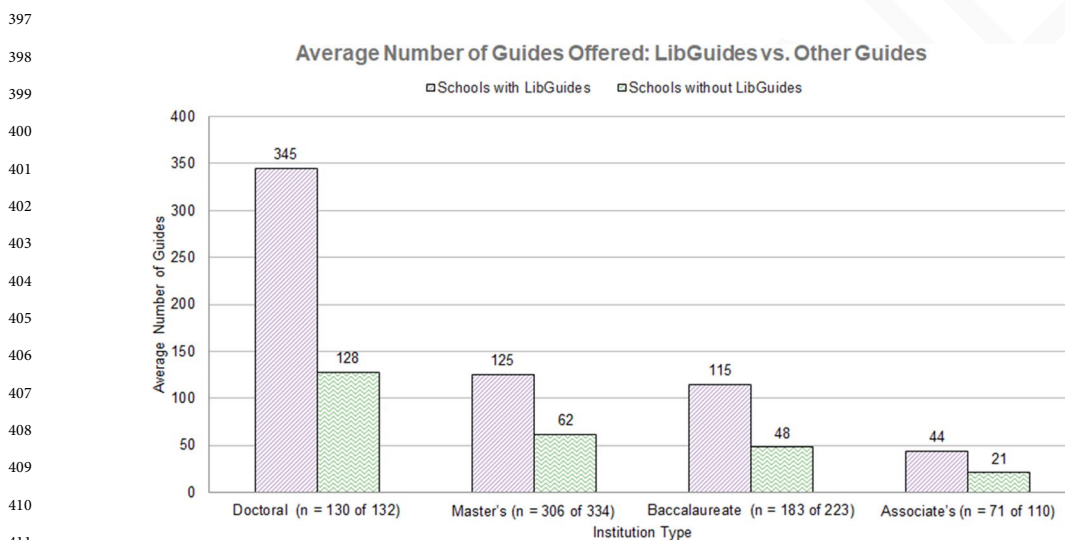
this study offered web-based library guides (see Figure 1). Web-based library guides are also produced in great quantity. In this study, the mean number of library guides offered was 333 guides for Doctoral-level institutions, 120 guides for Master’s-level institutions, 111 guides for Baccalaureate-level institutions and 39 guides for Associate’s-level institutions (see Figure 2).

The majority of institutions creating web-based library guides utilized Springshare’s LibGuides software. Among larger institutions, 95% of Doctoral-level institutions and 91% of Master’s-level institutions offer LibGuides. Even 77% of the Baccalaureate-level institutions and 50% of the Associate’s-level institutions provide their communities with LibGuides (see Figure 3).

A comparison of web-based library guide production for these institutions found that, on average, libraries using the LibGuides platform provided their communities with significantly more guides than those libraries that did not offer LibGuides (see Figure 4). Doctoral-level libraries that utilized



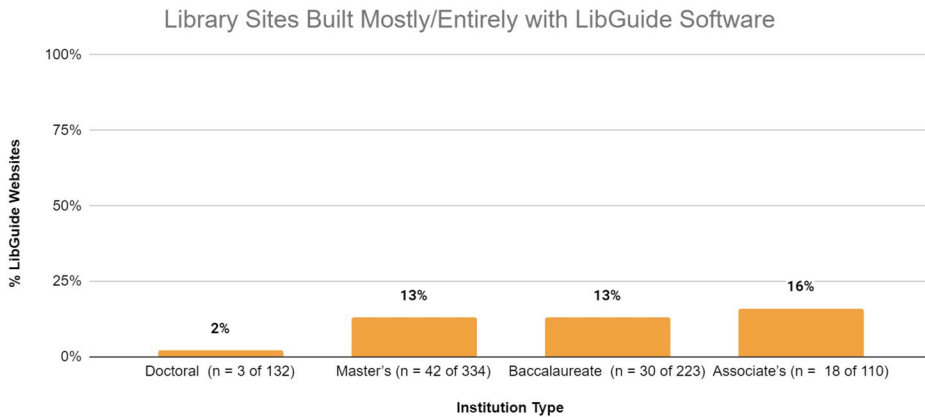
396 **Figure 3.** Schools offering LibGuides.



412 **Figure 4.** Number of guides Offered: LibGuides vs. other software. \*n=number of schools  
413 that listed the total number of guides publicly available or provided a means for computing  
414 this number.

415  
416 LibGuides offered an average of nearly three times as many library guides  
417 to their institutions as those Doctoral-level libraries using other software—a  
418 mean of 345 guides vs. 128 guides. Master's-level, Baccalaureate-level, and  
419 Associate's-level libraries utilizing LibGuides offered on average roughly  
420 twice as many guides as their counterparts featuring library guides built  
421 with other software—a mean of 125 guides vs. 62 guides for Master's level  
422 libraries, a mean of 115 guides vs. 48 guides for Baccalaureate-level libraries,  
423 and a mean of 44 guides versus 21 guides for Associate's-level libraries.

424 This study found that a significant number of schools were using LibGuides  
425 CMS software to build their library websites. Though only 2% percent of the  
426 Doctoral-level institutions were using LibGuides CMS to host their websites,

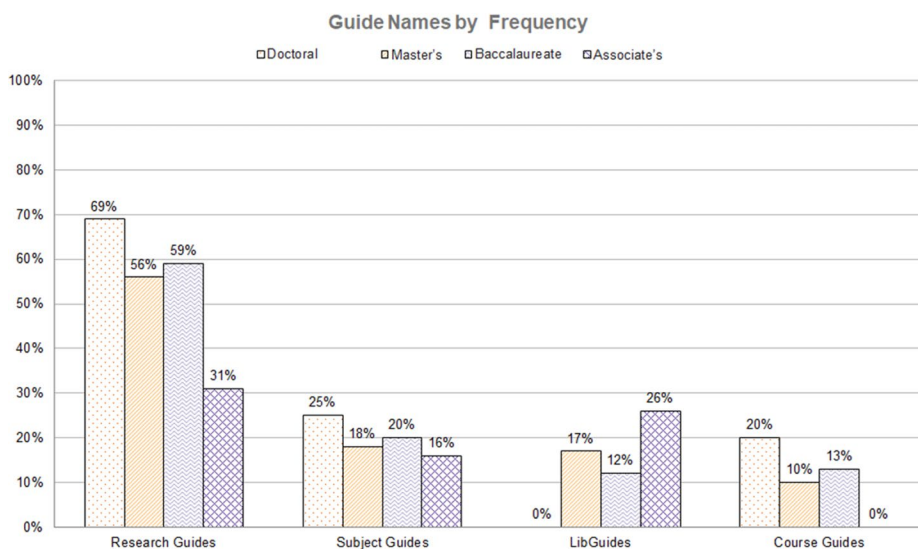


**Figure 5.** Library sites built mostly or entirely with LibGuides software.

13% of Master's, 13% of Baccalaureate, and 16% of Associate's-level institutions in this study were found to be using LibGuides CMS to craft the majority of their library webpages (see Figure 5). However, for those libraries already offering LibGuides, the likelihood that the library website is powered by LibGuides CMS increases. Fourteen percent of Master's-level libraries offering LibGuides also construct their websites with LibGuides CMS. Similarly, 17% of Baccalaureate-level libraries and 33% of Associate's-level libraries that offer LibGuides also feature library websites built with LibGuides CMS.

More than 70% of libraries from each Carnegie category in this study used only one name to describe their guides on the library homepage or in the title or headers of their library guide directories. Twenty-seven percent of all Doctoral-level, 21% of all Master's-level, 28% of all Baccalaureate-level, and 15% of all Associate's-level libraries were found to use two or more library guide names on the library homepage or in the title or headers of their library guide directories—exclusive of additional names that may have been used under the LibGuides "Type" category offered by some libraries. A total of 952 official names were used by the 727 libraries that offered library guides in this study. While 52 different names for web-based library guides were identified on library homepages or in the titles and headers of primary library guide directories of each library, only four names predominated: "Research Guides," "Subject Guides," "Course Guides," and "LibGuides" (see Figure 6). The term "Research Guide" was clearly the most-common across all four Carnegie categories studied, with 69% of Doctoral-level, 56% of Master's-level, 59% of Baccalaureate-level, and 31% of Associate's-level libraries using this label. Other guide names that appeared regularly across all four Carnegie categories at a frequency of 1%–5% were "Library Guides," "Guides," "Resource Guides," and "Citation Guides." Two Doctoral-level libraries, three Master's-level libraries, and four Baccalaureate-level libraries included either the

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**Figure 6.** Guide names by frequency. \*n= number of schools with named library guides. Percentages can add to either more than or less than 100% as many schools used both multiple names and other names for their guides.

name of the university, the library, or the school mascot as part of their naming scheme. Library historians should note that not a single institution in this study was using the once popular label "Pathfinder."

## Discussion

This study found that LibGuides have come to almost completely dominate the library guide ecosystems of the Doctoral- and Master's-level libraries in this study. Three-fourths of all Baccalaureate-level and roughly half of all Associate's-level libraries in this study had also adopted LibGuides software. There are likely multiple reasons for the dominance of LibGuides in academia. LibGuides are easy to produce and can be applied to a variety of purposes. For situations that require a degree of consistency, LibGuides can be used to quickly replicate guides with similar appearances. Ease of production within the LibGuides system, coupled with increasing workloads and decreasing numbers of library staff, could also encourage a shift to the LibGuides platform. Libraries experiencing a decrease in IT support might look to Springshare for guidance or quick fixes for instructional needs as membership in the "LibGuides Community" provides an array of examples and contacts to aid the would-be library guide builder (Springshare, 2021d). Affordability might also play a role. LibGuides have been touted as inexpensive and affordable since their inception (Bolls et al., 2011; Hernandez, 2010; Pozzebon et al., 2008; Reese & McCain, 2017; Sullivan, 2010; Whitmer, 2017). Still, others have noted the financial challenges

513 associated with any commercial library guide system (Davis, 2013; Daws,  
514 2016; Giullian & Zitser, 2015). A subscription to any product or service  
515 can be one-too-many for institutions that are struggling financially. Smaller  
516 schools in this study, which might logically benefit the most from easy-  
517 to-use Springshare products, were less likely to use LibGuides. This might  
518 indicate that cost and affordability are not straightforward variables and  
519 that even an inexpensive product might prove beyond the grasp of cash-  
520 poor libraries.

521 In their 2016 work, Jackson and Stacy-Bates note the historic techno-  
522 logical advances in library guide production and presentation. Over the  
523 years, these guides have evolved from print handouts, to websites, and  
524 now to LibGuides. This evolution has allowed librarians to create and  
525 modify their guides with increasing ease and speed. One of the clearest  
526 disparities uncovered by this study was the difference in the number of  
527 library guides offered by libraries using LibGuides and the number of  
528 guides offered by libraries relying on non-LibGuides software. For the  
529 schools under consideration, the mean number of library guides publicly  
530 offered by libraries with LibGuides significantly eclipsed that of non-Lib-  
531 Guides institutions across each Carnegie category analyzed.

532 The number of library guides made publicly available on library  
533 websites may represent only a fraction of all guides created by a library.  
534 The LibGuides system offers multiple status options for library guides.  
535 LibGuides that are “published” are available to the general public.  
536 “Private” LibGuides are only available to those who know the URL for  
537 that guide. “Unpublished” LibGuides are unavailable to the public. For  
538 LibGuides CMS users, there is also a “submit for review guides” status  
539 where the guide remains offline until published by a reviewer (Springshare,  
540 2021b). This study only tallied the “published” guides of each library.  
541 However, as LibGuides allows institutions to easily “unpublish” guides  
542 or make guides “private,” many LibGuides may periodically disappear  
543 from public view at the end of school years, semesters, events, or  
544 courses. Thus, this study may well be underreporting what already  
545 appears to be a decisive LibGuides predominance in library guide  
546 production.

547 The library guide naming analysis in this study discovered that, as in  
548 1985, 2002, and 2010 (Dunsmore, 2002; Jarvis, 1985; Morris & Del Bosque,  
549 2010), libraries continue to use a wide variety of labels for these resources.  
550 However, this study found that 77% of all the libraries used a single label  
551 to name their guides on their library homepage or in their primary library  
552 guide directory pages, a practice advocated for by Dunsmore. Though  
553 Dunsmore championed the term “Subject Guide,” a label used by 20% of  
554 the libraries in this study, the name “Research Guide” won out across all  
555



556 categories with 58% of all libraries opting for this guide name. Use of the  
557 label "Research Guide" varied from a high of 70% among research-focused  
558 Doctoral-level libraries to just 31% among Associate's-level libraries.

559 For some schools, Springshare software has become an alternative to  
560 other website-building software for the construction of library websites.  
561 Springshare suggests and encourages libraries to consider LibGuides CMS  
562 as a website alternative, noting on their Springshare Buzz newsletter  
563 "LibGuides CMS addresses all of your website concerns and provides a  
564 simple, easy to use, and affordable 'out of the box' library website solution"  
565 (Springshare, 2021g, para. 2). Though not an exhaustive list, Springshare  
566 now features a directory of more than 40 academic libraries that have  
567 created websites based on LibGuides CMS. This SpringShare Buzz website  
568 "Academic Library Examples" also provides testimonials and interviews with  
569 librarians involved in the adoption of LibGuides CMS (Springshare, 2021f).

570 This study found that more than 10% of all Master's, Baccalaureate, and  
571 Associate's-level libraries reviewed had opted to build the majority of their  
572 library website using LibGuides software. That percentage could well have  
573 been higher. This study simply used either the presence of the word "lib-  
574 guides" in the URL of the guide or website, or the presence of a "Login  
575 to LibApps" access point at the bottom of the guide or website to determine  
576 if the website was powered by LibGuides CMS. However, as noted by  
577 librarians on the Springshare webpage "Power Your Website with LibGuides  
578 CMS: Academic Library Examples—Unabridged Interviews," it is possible  
579 to create websites that bear little resemblance to LibGuides and leave no  
580 obvious trace as to their LibGuides CMS origins (Springshare, 2021f).  
581 Using these methods for detecting LibGuides CMS, the research team was  
582 only able to detect LibGuides CMS indicators for 34 out of 46 (or 74%)  
583 of the libraries listed as having LibGuides CMS websites on the Springshare  
584 webpage "Power Your Website with LibGuides CMS: Academic Library  
585 Examples—A-Z List" (Springshare, 2021e). If this sub-group of libraries is  
586 typical of all libraries, then the inspection method utilized in this study  
587 undercounted the number of libraries using LibGuides CMS to create their  
588 websites. Adjusting for a 74% detection rate would mean that perhaps as  
589 many as 17%-20% of the Master's-level, Baccalaureate-level, and Associate's-  
590 level libraries were designing their websites with LibGuides CMS.

591 Yet even if as many as 20% of libraries from a given Carnegie category  
592 were using LibGuides CMS, this is just a fraction of the libraries using  
593 Springshare for their library guides. Why are there not more schools taking  
594 advantage of LibGuides CMS? It might seem logical that the same cost,  
595 technical-support, and time-saving issues that could be influencing the  
596 migration to Springshare LibGuides would play a similar role for libraries  
597 confronted with the maintenance or redesign of their entire webspace.  
598

599 Research by Kim (2011) into the various factors influencing academic  
600 library website design found that gathering advice from other web design  
601 experts was a significant need. As Springshare prides itself in providing  
602 direct and community support to subscribers, this should be an incentive  
603 to consider LibGuides CMS. Kim also showed that copying ideas from  
604 other university websites was a strong factor in website design. Since  
605 Springshare encourages the sharing of design ideas among its subscribers,  
606 this could be another argument for LibGuides CMS adoption. However,  
607 the vast majority of libraries is not adopting a LibGuides CMS approach.  
608 Perhaps there simply is not yet a large enough body of LibGuides CMS  
609 users to inspire confidence or provide enough examples for consideration?  
610 Complying with institutional website design guidelines was a factor that  
611 Kim found often played a key role in library website design. Thus, the  
612 strongest countervailing force to website building with LibGuides CMS  
613 may be the need for libraries to conform to university web design guide-  
614 lines and policies. Library websites designed with LibGuides CMS may  
615 prove unacceptable to institutional administrators. In addition, the design  
616 and maintenance of the library website might fall to those outside the  
617 library who have little interest in or familiarity with LibGuides CMS.  
618

### 619 **Limitations**

620  
621 The ongoing implementation, application, and evolution of library guides  
622 make studying this area challenging, with many variables that prove to  
623 be moving targets. This study was conducted at a time—the summer break  
624 for many North American institutions—when some guides may have been  
625 removed from public view.

626 Different practices for naming and grouping LibGuides, as well as vari-  
627 ation in the reporting of the total number of LibGuides, proved a challenge  
628 for this research as well. A significant fraction of libraries that offered  
629 LibGuides did not provide a tally of the number of LibGuides available  
630 to the public, necessitating some time-consuming detective work on the  
631 part of the researchers. As noted in the previous section, the inspection  
632 methods used to determine if libraries were using LibGuides CMS software  
633 to build their library websites appeared to have only a 74% success rate.  
634 Therefore, it is quite possible that LibGuides CMS was being used to build  
635 websites at slightly higher rates than detected by this study. A direct survey  
636 of library webmasters in the manner of Connell (2013) would definitively  
637 identify instances where websites were built with LibGuides CMS for all  
638 cases that received a survey response (Connell was able to obtain a 40%  
639 response rate), though this would be a labor-intensive and time-consuming  
640 endeavor.  
641

642 This study excluded those schools whose libraries' lack a publicly visible  
643 web-presence. This study also reached a compromise to resolve the prob-  
644 lem of measuring and comparing LibGuides use for groups of institutions  
645 sharing a common library or set of online resources (e.g. a consortium  
646 of Doctoral, Master's, Baccalaureate, and Associate's-level institutions). In  
647 these cases, this study only considered the largest of the institutions and  
648 excluded all other associated schools. Finally, though this study considered  
649 nearly 800 academic libraries, this only represented four of the 33 Carnegie  
650 "Basic classification" categories.

### 652 **Future directions**

653 Though this study looked at some of the factors of web-based library  
654 guide application and use in academic libraries, there are numerous other  
655 variables that also deserve attention. For instance, to what degree are  
656 web-based library guides accessible to those with various disabilities?  
657 Several authors (Bergstrom-Lynch, 2019; Gonzalez & Westbrook, 2010;  
658 Goodsett et al., 2020) have put forth sets of best practices for LibGuides  
659 design. These would allow for a comprehensive analysis of best practice  
660 implementation across a spectrum of institutions. Likewise, groups of  
661 academic libraries could be studied to see to what degree their LibGuides  
662 or other web-based library guides meet new accessibility standards. Giullian  
663 and Zitser (2015) argue that many library guides foster a digital divide  
664 as they serve primarily as conduits to expensive library-purchased resources  
665 accessible only to members of a particular academic community. This too  
666 could be considered in greater detail by perhaps measuring the fraction  
667 of the content of library guides that is open access.

668 This study was conducted in a pre-COVID-19 environment. If, as a  
669 result of the pandemic, there was higher demand for online library  
670 resources that can be safely used at a distance, the creation of library  
671 guides could well have increased significantly. A follow-up study of library  
672 guide numbers could provide some insight into the response to this crisis.

673 This study included a tally of websites crafted with LibGuides CMS. A  
674 follow-up study could measure whether this is a trend and, if so, how  
675 rapidly it is accelerating. A more qualitative study similar to that conducted  
676 by Connell (2013) would perhaps provide greater accuracy and complement  
677 this information by providing insights into why libraries are choosing  
678 this option.

679 Though this study more clearly defined the details of LibGuides adop-  
680 tion among a selected array of academic libraries, there are many questions  
681 yet to be answered regarding this very popular resource. As academic  
682 institutions face economic stress, libraries are increasingly under pressure  
683 to prove the value of their resources and services. Demonstrating the  
684

685 benefits of LibGuides could thus be considered an increasing research  
686 priority.

687 This study has helped demonstrate the degree to which Springshare's  
688 LibGuides has become the dominant library guide software in academia.  
689 A skeptic might ask if widespread adoption of this one software product  
690 will discourage experimentation and innovation, or expose the academic  
691 library world to yet one more monopolistic practice. An optimist might  
692 ask instead if near-universally adopted software creates greater opportu-  
693 nities for shared experiences and the development of a community of  
694 practice and understanding. Time, experience, and perhaps future research  
695 may answer these questions as well.

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