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Case study: Does following updated best practices increase LibGuides usage?

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Abstract

This case study describes the work of a library task force led by the author to implement best practices for the design of web-based library guides using the LibGuides platform. The task force's goal was to increase usage of guides. The task force learned that students were primarily finding library guides through searching on the open web, which has significant implications for guide design. It was hoped that incorporating usability research and search engine optimization (SEO) techniques into guide design would drive more traffic to the guides. Statistics available from the LibGuides platform were compared between the 2020-21 academic year and the 2021-22 academic year but no improvement in guide usage was found. In fact, usage for most guides was lower in 2021-22.

Keywords

LibGuides, usage analysis, best practices, search engine optimization

Introduction

In January of 2021, the author was asked to lead a task force which included librarians and staff from each of Rowan University's three campus libraries. The charge of the task force was "to recommend and implement ways to optimize user success for the discovery of library resources using LibGuides." LibGuides is a proprietary platform for the creation of web-based guides available by subscription from Springshare, used by many academic libraries to direct students to the library resources they need. Based on the statistics for user page views provided by the LibGuides software, the library leadership team was concerned that few students were using the guides.

The seven-member LibGuides Task Force met monthly for six months in 2021 to evaluate the Libraries' 200-plus published guides, consider why they might not be garnering usage from students, develop a list of best practices for guide authors, and give a workshop explaining how to implement the recommendations. It was expected that librarians responsible for the guides would update them using the best practices prior to the start of the 2021-22 academic year in September. This case study will describe what the task force learned about best practices for LibGuides design and whether the implemented changes made a difference in usage of guides.

At the author's institution, all courses were held online due to the pandemic during the 2020-2021 academic year, and most courses reverted to in-person in 2021-2022. Authentication is not needed to access the university's LibGuides; they are publicly available. The statistics supplied by Springshare are based on web traffic, which does not distinguish between university-affiliated users and the rest of the world.

Literature Review

It has been 10 years since Pittsley and Memmott published a key finding for LibGuides designers: students did not recognize horizontal tabs, used to navigate between pages in

typical LibGuides, as navigational elements and completely ignored them (Pittsley & Memmot, 2012). The same issue was found in a later study by Quintel: students did not see or use the dropdown menus and thus missed a lot of guide content (Quintel, 2016). In the past 10 years, horizontal tab navigation has become rare on the web, and a number of similar usability studies have established that students do not understand the tab-based page navigation used on the LibGuides platform.

Several usability studies, including one by Sonsteby and DeJonghe, showed that students experienced information overload when they used library guides (Sonsteby & DeJonghe, 2013). They would rather not have to navigate multiple pages of a guide at all, they just want to go directly to the information they need. They would prefer that each guide be limited to a single page, or at least displayed to them as a single page (there is a "Display as Single Page" option in LibGuides). Failing that, a minimal number of pages with a Table of Contents is best. Additionally, Sonsteby and DeJonghe recommended focusing on user information needs (how to do specific tasks) rather than giving long lists of resources grouped by format.

Usability testing by Costello, Del Bosque, Skarl, and Yunkin at the University of Nevada Las Vegas generated a number of interesting findings (Costello et al., 2015). Their recommendations included making navigation similar across guides, using fewer tabs, curating resources to a small selection, and limiting guide content overall to avoid overwhelming the student. An especially useful suggestion was to figure out common tasks that need to be done in specific disciplines and gearing guides towards those tasks.

In a recent analysis of 12,781 subject guides from 114 research university libraries, Hennesy and Adams found that many fell short of best practices (Hennesy & Adams, 2021). The mean number of tabs per guide was 8.4, which is quite high given the ubiquitous advice to limit or avoid tabs. They also found that nearly half of guides

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left the guide description field blank, and 21% had no subject tags – both of which affect discoverability by search engines.

A study by Castro Gessner, Chandler, and Wilcox at Cornell University of how students use the top-level LibGuides search box found that users most often searched by course title, course number, or professor name, rather than by subject (Castro Gessner et al., 2016). This finding highlights the importance of creating course-specific guides and making sure they have good metadata that will allow them to be found by students. A good way to limit guide content and support student coursework is to define specific learning outcomes for each guide, as suggested by German (2017). This approach to LibGuides design envisions a library guide as a form of library instruction, not a list of everything that could possibly help a student. Usability testing at the University of Houston (Lierman, 2019) showed that students preferred guides to be focused on specific tasks (such as citing sources) not on subjects or user types. Students also "tended to gravitate toward course guides" because the guide titles were more specific (Lierman, 2019, p. 83).

Because students are often looking for course-related library resources, many academic libraries have worked with their instructional technology departments to automatically embed links to relevant course or subject guides in their school's course management systems. This can be very effective. Using Google Analytics, Griffin and Taylor found that their course management system was the top referrer to LibGuides with 30% of guide traffic; 26% of users arrived directly using a bookmark or typing in the guide address; 20% came through the library website and 19% came through Google (2018). Only 0.13% of users came through their discovery system. Griffin and Taylor emphasized that "users are likely to encounter the guide outside of the context of the library homepage" (p. 156) and thus institution-specific context (such as access

restrictions) and search engine optimization (SEO) features (like descriptions and tagging) are critical.

At Seton Hall University, the university was not able to embed guides in the course management system, so the librarian contacted instructors directly about adding links to specific LibGuides to their course shells (Clever, 2020). The librarian found that this personal approach led to more instruction requests and more awareness of library resources by instructors. However, guide usage comparisons between 2018 and 2019 showed increased usage in only six of the 11 guides involved.

A recent study by academic librarians at Cape Peninsula University of Technology in South Africa considered usage of LibGuides before and during the COVID-19 pandemic (Becker et al., 2022). They found that guide usage dramatically increased during the lockdown in 2020 when no classes were held, but returned to previous levels soon after.

The work of the LibGuides task force

The library on the main campus at Rowan University has subscribed to LibGuides since 2007 and has been through several previous efforts to overhaul and improve library guides. But last year's task force work was specifically focused on improving usage. Although guides are available on the homepage of each campus library's website and promoted by subject librarians in classroom instruction, statistics for page views were discouragingly low. More than half of the author's 30 guides had less than 100 views during the entire 2021-2022 academic year. The guide for the Digital Scholarship Center, by contrast, had over 25,000 views. Google Analytics confirmed that the Digital Scholarship Center guide has the most page views of any webpage belonging to Rowan University Libraries – even more than the Databases A-Z list.

The task force began its work by dividing up the entire list of guides among the seven members for a detailed review, focusing on finding broken links that could discourage usage. There were some guides with a significant number of links that had not been updated since the migration of the university's integrated library system (ILS) and discovery platform in 2019. The list of guides needing prompt fixes was sent out to guide authors immediately and those issues were taken care of by early summer.

In the meantime, the task force found out something which in hindsight should have been recognized long ago. After reviewing Google Analytics data provided by the library's website developer, the author realized that 80% of guide views were "organic", that is, coming directly to guide pages through search engines. The other 20% were referrals from other sites, often using links shared by guide authors or course instructors. No one (literally 0% according to Google Analytics) was finding guides directly by navigating to the Research Guides link on the library homepage and then searching for an appropriate guide. Instead, most users were searching keywords in search engines that led them to specific pages of guides. This was a major revelation to the task force and to guide authors, who had not designed their guides to be used that way. They had assumed that users would always land on the guide homepage first and then navigate to internal pages. Thus, internal guide pages often lacked contextual information and made assumptions about what users already knew.

After some task force members attended a May 12, 2021 Springshare webinar called "Maximizing search in LibGuides and LibAnswers", it became apparent that there were additional issues resulting from the fact that users were typically finding the library guides through Google. To improve discoverability, all guides needed to include metadata like guide and page descriptions, subjects, tags, and "friendly" URLs. A "friendly URL" in LibGuides uses words rather than the set of digits assigned to

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identify a guide. These options had always been available in the LibGuides software, but many guide authors had ignored them because they were not thinking in terms of SEO.

Another task force discussion across several meetings focused on the library's new discovery system, Primo from ExLibris. The library systems team offered to begin indexing the guides in Primo, so students could encounter them in the library's primary search engine. The medical librarians chose not to participate because their users did not use Primo, but the main campus librarians agreed to allow indexing of their guides.

The next phase of the task force's work was developing a "Best Practices" internal guide for guide authors. This effort was led by a librarian who had been the LibGuides administrator in a previous academic library position. For this reason, some of the best practices were carried over from that library's LibGuides work and others were newly added to focus on ways to drive web traffic to the guides.

After creating the "Best Practices" guide, the task force scheduled a virtual workshop for all LibGuides authors on July 28, 2021 to present the information. The workshop was well-attended and well-received. Following the workshop, guide authors had a month to update their guides prior to the start of the 2021-22 school year. While the task force hoped that the use of best practices would drive more traffic to all the guides, it was felt that improving the guides was worthwhile regardless of the effect on web traffic.

LibGuides best practices
The list of recommended best practices developed by the task force, with rationale for each, is provided below (Table 1).

Best Practice	Rationale
Index guides in your library discovery system.	Allows students to discover your guides at their point of need.
Add as many relevant subject tags as you can.	Good metadata is critical to guide discoverability by search engines.
Assign each guide a unique friendly URL that represents the content of the guide.	An easy-to-remember URL increases the likelihood that users will return to the guide.
Minimize the scope of content for each guide, with the goal of covering all the material in a single page if possible.	Avoids the need for a navigation structure for internal pages within the guide.
If multiple guide pages are unavoidable, use the "Display as Single Page" option.	Displays guide content in a way that makes browsing the guide easy for students.
Tag guides with relevant course numbers, course titles, and instructor names.	When students search the library guide system they often search by course number, course name, or professor.
For undergraduate students, create topic or course guides instead of subject guides.	Undergraduates do assignments for specific courses, not general subjects. Only graduate students are likely to use guides offering resources for an entire subject discipline.
Include a description (the text below the title of the guide) on each guide. It will appear at the top of every guide page.	Users often encounter guides out of context when searching on the web - they may land on an internal page of your guide, and need to understand what they are looking at.
Include a "Welcome" or "Introduction" box at the top of each guide with a brief description of how and why users should use this guide.	Many students are encountering a library guide for the first time and need to understand what it is and what it is for.
Include a "Help" box in the main navigation of each guide, with information about contacting a librarian or reference service.	Users are familiar with the term "Help" on webpages and will go there when looking for personalized help.
If the guide must be more than one page long, include a table of contents in the "Welcome" or "Introduction" box.	Providing a table of contents helps users to notice and use subpages.

Use left-hand navigation instead of horizontal tabs.	Students frequently overlook horizontal tabs on webpages because they are rarely used as navigational elements on modern webpages.
Place the most important content on a guide at the upper left (or at least at the top).	Users tend to scan web pages in a roughly F-shaped pattern (from left to right across the top, down and from left to right again).
Organize and label pages and boxes by research task rather than content type, using action verbs, e.g., "Find Articles" rather than "Databases".	Students are task-focused and often not familiar with library terminology. They want to go right to the information they need, not browse the whole guide.
Try to be consistent in naming guide, page, and box elements across your guides. Ideally, also be consistent with naming practices across your LibGuides site.	The more that guides across your library use similar layouts and language, the more easily a user can master a new guide after having used others before.
In topic and course guides, highlight the three (or fewer) best databases for the course or subject on the guide home page.	Students find the amount of information on most guides overwhelming - they often just want to know which database to search for content on their topic.
Show box-level navigation on the left side navigation element for longer pages.	Showing the headings of all of a page's content in the navigation provides a preview for the user.
Provide brief descriptions for all links and (when appropriate) boxes.	Users want to know what to expect before selecting a link, but keep it brief! Short text descriptions of the contents of links and boxes are most valuable to users.
Use "clean and simple design": minimize text, eliminate unnecessary elements, and use plentiful white space.	"Clean and simple design" is something users frequently cite as valuable and pleasing in guides. The more cluttered a page is, the more overwhelming and difficult to scan it becomes.
Use clear, jargon-free language.	Users are often unfamiliar with library terms, even those that seem basic to librarians. If it is necessary to use a library-specific term like "Interlibrary Loan", always include a brief definition.
If providing a search widget on a guide, include a link to the home location of the resource as well.	Widgets save users' time, but they present search interfaces out of context. Providing a link helps users find the

	search interface in its original context in the future.
Include text alternatives for all images that convey content. Make captions or transcriptions available for all audio and video included in guides.	Libraries have a responsibility to make all web content equally accessible for all users.
Link targets should be identifiable from link text alone, e.g., "JSTOR" rather than "To access JSTOR, click here".	Screen readers include features that allow users to quickly scan through all links that are available on a page, without reading through the whole page. This means that users of this technology may encounter links outside their original context, so information about where the link will lead should be included in the text of the link itself.

Table 1 – Best Practices

Results of usage analysis

To investigate whether the changes recommended by the LibGuides Task Force had any effect on LibGuides usage, the author compiled and compared monthly data for page views provided by the LibGuides platform for two time periods: September 2020 through May 2021, and September 2021 through May 2022. Summer page views were not included since that was when the changes were made. Data was collected using the Statistics menu option, for all Published guides in the main campus LibGuides instance.

Since the goal was to compare page views between the 2020-21 academic year and the 2021-22 academic year, six new guides which were created after the workshop on July 28, 2021, were removed from the spreadsheet because they would not have usage for 2020-21. Similarly, guides which had not been updated (according to the "last updated" date in LibGuides) since before July 28, 2021 were also removed. The Digital Scholarship Center guide was also excluded.

As shown in Figure 1, of the 10 guides with the highest page views in the 2020-2021 period, only two ("Civil Rights in the United States" and "The WPA Federal Writers' Project") showed higher numbers of page views in the following academic year. Page views for the other eight guides decreased. In both years, the combined page views of the top 10 guides accounted for more than half of the total page views of all 159 guides (see Table 2).
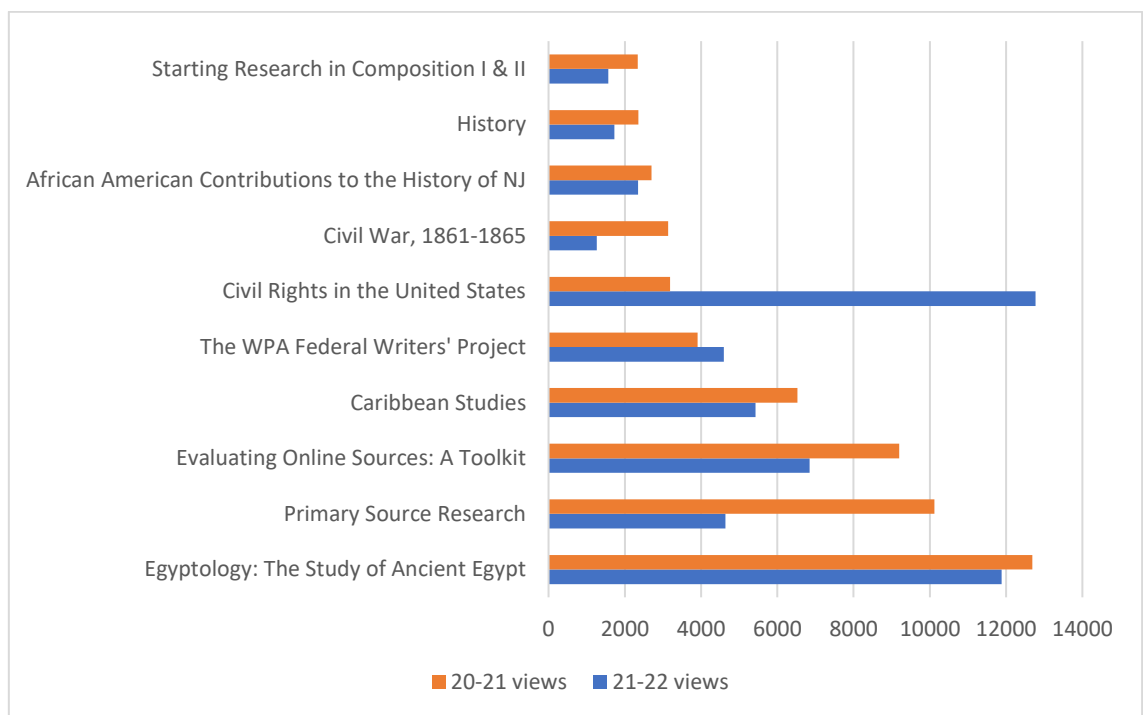
Figure 1. Comparison of page views for top 10 most-used guides of 2020-2021.

The picture was the same when looking at total page views for all guides between the two periods. As shown in Table 2, both total page views across 159 guides and average page views per guide were lower in the more recent period, 2021-22. There were 68 guides (43%) for which page views increased and 91 guides (57%) for which page views decreased. Total page views for the 159 guides that existed in 2020 decreased from 98,957 in 2020-2021 to 96,514 in 2021-2022.

	Sep 2020 - May 2021	**Sep 2021 - May 2022**
Combined page views of 10 most-used guides	56,157	53,076
Total page views (159 guides)	98,957	96,514
Mean page views per guide	622	607
Number of guides with more page views in 2020-2021	91 (57%)	
Number of guides with more page views in 2021-2022		68 (43%)

Table 2. Comparison of guide page views.

Overall, this was a disappointing result. Based on this data, it is not possible to say that implementing the best practices increased page views for the library's guides.

Discussion

Spot checking of guide updates indicated that most guide authors had implemented the best practices recommended in the workshop. It is possible that online resources like LibGuides had more usage during the 2020-21 academic year because all courses were

online that year and students had to be more independent in finding help. It was not clear whether other factors might have contributed to the lower overall usage.

The author chose to investigate further whether there were differences in usage based on type of guide, bearing in mind that usability studies show that guides targeted to entire subject areas (e.g., English, History, Psychology) are less useful to undergraduates.

The LibGuides platform offers four public-view guide "types", with the default labels "Subject", "Topic", "Course", and "General". As of June 2022, 18 of the 165 main campus published guides were identified as Course guides, 37 were classified as Topic guides, 63 were Subject guides, and the remaining 47 were labelled General. The main campus library uses the LibGuides platform to display library databases, so Subjects are set up as a controlled vocabulary across guides and databases. This avoids the problem of whether something is a Subject or a Topic, since it has been decided that Subjects must correspond to a department or program offered at the university. The difference between Topic and Course guides is less clear but Topic guides tend to fall in between a broad subject and a specific course. Guides that are not focused on specific curricular content but are more about research methods or technology (e.g., "Citing Sources", "Data Privacy") are labelled as General guides.

Topic guides comprised 22% of guides but accounted for 45% of total page views between September 2020 and May 2022, making them the most popular type of guide. For example, the topic guide "Civil Rights in the United States" was the most-viewed guide in 2021-22. Subject guides on the other hand comprised 38% of guides but accounted for only 18% of page views. Course guides only accounted for 5% of total page views, despite the studies pointing to their importance to students. Potentially this means that General guides (such as the "Evaluating Online Sources Toolkit" and the

guides on ways to properly cite sources) are meeting students' needs best. Figure 2
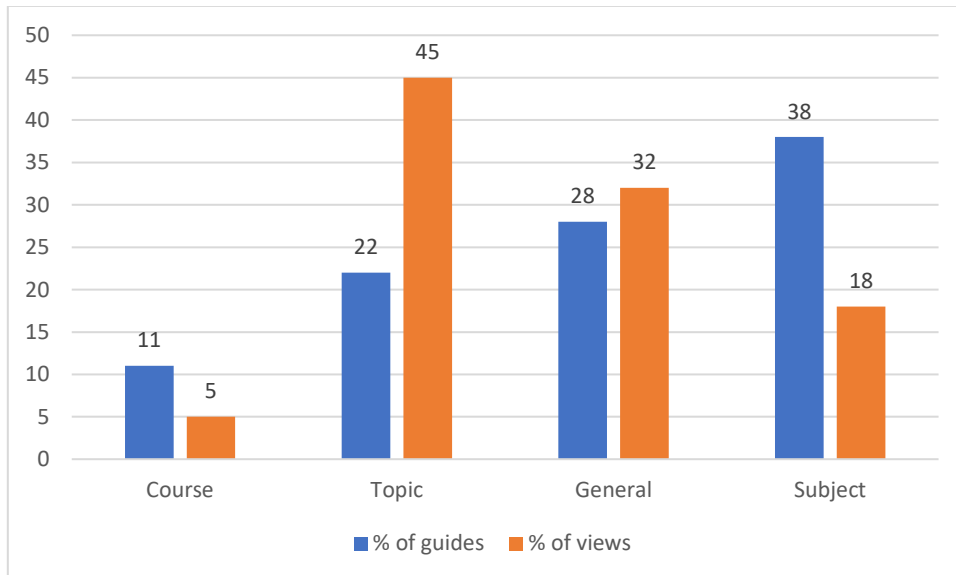
shows the breakdown of guides by type and usage.

Figure 2. Comparison of page views by guide type.

Conclusion

There are clearly other factors at play in determining usage of LibGuides beyond use of

best design practices. It is possible that students turned to online library resources like

LibGuides more often in 2020-21 because they were taking their classes online from

home, compared with the following year when in-person classes resumed, though that is

speculation. While the aggregate number of page views was higher in 2020-21, some

individual guides did have higher usage in 2021-22. It does not appear to be possible to

isolate the relationship between design practices and page views in LibGuides.

However, the members of the task force learned a great deal from this experience about

how Rowan University students interact with the library's web content, and now have a

better understanding of how to optimize LibGuides for web searching.

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