ARTICLE
Tending to an Overgrown Garden
Weeding and Rebuilding a LibGuides v2 System

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ABSTRACT

In 2019, the Borough of Manhattan Community College's library undertook a massive cleanup and reconfiguration of the content and guides contained in their LibGuides v2 system, which had been allowed to grow out of control over several years as no one was in charge of its maintenance. This article follows the process from identifying issues, getting departmental buy-in, and doing all of the necessary cleanup work for links and guides. The aim of the project was to make their guides easier for students to use and understand and for librarians to maintain. At the same time, work was done to improve the look and feel of their guides and implement the built-in A-Z database list, both of which are also discussed.

INTRODUCTION

In early 2019, the A. Philip Randolph Library at the Borough of Manhattan Community College (BMCC) (part of the City University of New York (CUNY) system) hired a new web and systems librarian. The position itself was new to the library, though some of its functions had previously been performed by a staff member who had left more than a year prior. It quickly became apparent to the newest member of the library's faculty that, while someone had at one point managed the website, the same could not really be said for the library's LibGuides system and the mass of content contained within.

The library's LibGuides system was first implemented in January 2013 and over time the system came to be used primarily by instruction librarians to serve their teaching efforts. Not long after BMCC implemented LibGuides, Springshare announced LibGuides version 2 (v2), a new version of the system that included several enhancements and features not present in the earlier version.[1] These features included the ability to mix content types in a single box (in the earlier version, for example, boxes could have either rich text or links but not both), a centrally managed asset library, and an automatically-generated A-Z database list designed to make it easy to manage a public-facing display. BMCC moved to LibGuides v2 around early 2015, but few of those who worked with the system ever took advantage of the newer features offered for quite some time, if at all.

At the time the web and systems librarian came aboard, the BMCC LibGuides system contained over 400 public guides and an unwieldy asset library filled with duplicates and broken widgets and links. Many of the guides essentially duplicated others, with only the name of the classroom instructor differing. There were, for example, 69 separate guides just for English 101, some of which had not been updated in three or four years. There were there no local guidelines for creating or maintaining guides, and in theory, each librarian was responsible for their own. However, it was apparent that in practice, no one was actively managing the guides or their related assets, as the lists of both were overwhelming. The creators of existing guides were primarily reference and instruction librarians whose other responsibilities meant there was little

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time to do guide upkeep and because there was no single person in charge of the guides, there was no one to ensure any maintenance took place.

In addition to the unwieldy guide list and asset library, the BMCC Library was also effectively maintaining two separate A-Z database lists, one on the library's website that was a homegrown SQL database built by a previous staff member, and another running on LibGuides to provide links to databases via the guides. The lists were not in sync with one another and several of the librarians were unaware that the LibGuides version of the list even existed, leading to links to databases appearing on both the database list and as link assets. And, while the LibGuides A-Z list was not linked from the library's website, it was still accessible from points within LibGuides, meaning that patrons could encounter an incorrect list that was not being maintained.

GETTING STARTED

Before any work could be done on our system, there needed to be buy-in from the rest of the library faculty. With the library director in agreement, agenda items were added to department meetings between March and May 2019 for discussion and department approval.

The various aspects of the project were pitched to emphasize the following goals:

- Removing outdated material, broken links, etc.
- Streamlining where information could be found
- Decluttering guides to make everything easier to use and understand for students
- Improving the infrastructure to make maintenance and new guide creation easier and more manageable
- Standardizing layouts and content

The aim of all of this would be to increase guide usability, accessibility, and make the guides overall a more consistent resource for our students. For the sake of transparency (as well as to have a demo of some of the aesthetic changes discussed in more detail below), a project guide was created and shared with the rest of the library department to share preliminary data as well as detailed updates as tasks were completed.[2]

PROCESS

The Database List
While the LibGuides A-Z database list, a feature built into v2 of the platform, contained information about our databases, it was essentially only serving to provide links to databases when creating guide content. There was some indication, in the form of a dormant A-Z Database "guide," that someone had tried to create a list in LibGuides by manually adding assets to a guide. While that was a common practice in LibGuides v1 sites, as the built-in list was not yet a part of the system, the built-in list itself was never properly put into use. The links on our website all pointed to a homegrown list which, while powered by an SQL database, was essentially a manual list. Because of its design, it had proved impossible for anyone in the library to update without extensive web programming knowledge. It seemed a no-brainer to work on the database list first. This way we had both the infrastructure to update database-related content on the guides and a single and up-to-date list of resources with enhanced functionality that could benefit the library's users almost immediately.[3]

To begin, the two lists were compared to find any discrepancies, of which there were many. As the e-resources librarian was on leave at the time, the library director was consulted to determine which of databases missing from the LibGuides list were active subscriptions (and which of the ones missing from the homegrown list were previously cancelled so they could be removed). Once the database list reflected current holdings, the metadata entries for the databases on the LibGuides side were updated to include resource type, related subjects, and related icons. These updates would enhance the functionality of the LibGuides list, as it could be filtered or searched using that additional information, something that was missing from the homegrown list.

In addition to updating content and adding useful metadata, some slight visual changes were made to improve the look and usability of the list using custom CSS. Most of this was done because as the list was being worked on, several librarians (of those who were even aware of it in the first place) mentioned that one reason they disliked the LibGuides list was because of the font size and spacing, which they felt was too small and hard to read.

With the list updated, it was presented at the March 2019 department meeting and quickly won over all in attendance, especially when it was pointed out that the list could be very easily maintained because it required no special coding knowledge. While the homegrown list would remain live on the server for the rest of the semester (so as to not disrupt any classes that may have been using it), it was agreed that the web and systems librarian could go ahead with switching all of the links pointing to the homegrown list to point to the Springshare list instead.

The Asset Library
Because of how guides were typically created over the years since adopting LibGuides (many appeared to have been copied from another existing guide each time) the asset library had grown immense and unmanageable. For example, there were 149 separate links to our "Databases by Subject" page on the library's website, the overwhelming majority of which were only used once. There were also 145 separate widgets for the same embedded Scribd-hosted keyword worksheet, which was in fact broken and displayed no content. This is to say nothing of the broken-link report that no one had reviewed in quite some time. Tackling the cleanup of duplicates and fixing of broken links/embeds was a large piece of the invisible work taken on behind the scenes to make maintaining the guides easier in the future. In order to analyze the data, the asset library report was exported to an Excel file to make it easier to identify issues that needed correction.

To start this process, we requested that Springshare technical support wipe out all assets (other than documents) that were not mapped to anything and were just cluttering up the asset library (this ended up being just under 2,000 assets).[4] Most of those items had been removed from the guides they were originally included on but were never removed from the asset library. They served no real function other than to clutter up the backend. The guide authors had given the web and systems librarian permission to remove anything broken that could not be easily fixed. This included the aforementioned broken worksheet (and other similar items), as well as an assortment of YouTube video embeds where the video had since been taken down, resulting in a "this video is unavailable" error message. It was felt that since those were already not working and seriously hurt the reliability of our guides to our users, that no further permission was needed.

Then came the much more tedious task of standardizing (where possible) which assets were in use. This involved going into guides listed as containing known-duplicate assets, replacing them with a single, designated asset, and then removing the resulting unmapped items.[5] It was decided

that while many of the guides would likely be deleted after the spring semester, that only assets appearing on currently-active guides would be standardized. While in hindsight, as many of the links that were fixed were on guides that were soon-to-be deleted, it would have been better to hold off and wait until guides could be deleted first. However, doing at least some of this work in advance helped find other issues including instances where our proxy prefix was included directly in the URL (an issue as we were also in the process of changing our EZProxy hosting) and where custom descriptions or link names were unclear.

"Books from the Catalog" assets had their own issues that also needed to be addressed. With a pending migration of the library's ILS, it was already apparent that the links to any books in the library's catalog would need updating so they could have a shot at continuing to function post-migration.[6] We had been told at the time that the library's Primo instance would remain through the migration (though this changed during the migration process) so at the time we felt it important to ensure that all links were pointing to Primo, as some had been pointing to the soon-to-be decommissioned OPAC. For consistency, the URLs were structured as ISBN searches instead of ones relying on internal system numbers that would soon change. However, it became obvious very early on that some of the links to books were either pointing to materials that were no longer in the library's collection, or were pointing to a previously decommissioned OPAC server, both of which resulted in errors. Because the domain of the previously decommissioned OPAC server had been whitelisted in the link checker report settings, these items had not appeared on the broken link list. Using the filtered list of "Books from the Catalog" assets, all titles were checked, which allowed the web and systems librarian to remove items that were no longer in the collection and make other adjustments as needed.

As a result of the asset cleanup process, the asset library went from an unwieldy total of more than 5,000 items to just over 2,000 items. It also simplified the process for reusing assets in new guides, as there was now only one choice per item, and made it much easier to find and fix broken links and embeds.

The Guides
The cleanup of the guides themselves was by far the most complex task. Before starting the guide cleanup work itself, the web and systems librarian performed a content analysis to identify and recommend guides for deletion and which could be converted into general subject area guides. Because a common practice was to create a "custom" guide for each class that came in for a library instruction session, there was an overrepresentation of guides for the classes that had regular sessions: English 101 (English Composition), English 201 (Introduction to Literature), Speech 100 (Public Speaking), and Introduction to Critical Thinking. Those four courses accounted for 187 guides, or over 40 percent of the total number in our system. The majority of them had not been updated directly in over three years, and in some cases, were designed for instructors who no longer taught at the college. Perhaps more telling was that the content for these guides differed more across the librarians who created them than across the courses they were designed for. This meant that while there might be three or four different iterations of the English 101 guide, the guides created by the same librarian for different introductory courses were essentially the same.

Before the arrival of the web and systems librarian, one of the other librarians had been occasionally maintaining guide groups for "current courses" and "past courses," but it was unclear if anyone was still actively maintaining these groupings, as guides for current instructors were sometimes under "past courses" and vice versa. Because these groups did not actually hide the

guides from view on the master list of guides and appeared to be unnecessary work, it was decided to remove the groupings. Instead, the web and systems librarian would plan to revisit the guides on a regular basis to unpublish/remove anything for courses that were no longer taught. However, since the philosophy behind the guides was to move from "custom" guides for each instructor's section to a general guide for the course as a whole for the overwhelming majority of cases, the need for maintaining these groupings was essentially eliminated anyway.

In May 2020, a preliminary list of guides to be deleted was presented to the librarians at the monthly department meeting. The list was broken down as:

- Duplicates to be deleted: This portion consisted primarily of course guides like those mentioned above where multiple guides existed for the same course, most of which used the exact same content.
- Guides to be "merged:" While merging guides is not actually possible in the LibGuides platform, there were cases where we had two or three for the same course. They could be condensed into a single guide with the rest deleted.
- Guides to convert to subject area guides: These were guides that were essentially already structured as a subject guide but were titled for a specific course, and in many cases, a guide for the subject area did not already exist (for example, a course-specific guide for business would become the business subject area guide).
- Dead guides: These were guides that had not been updated in more than two years and had not been viewed in at least one year.

Librarians were given an opportunity in the department meeting to comment on the list, as well as to contact the web and systems librarian with any comments. Additionally, as some of the classroom faculty on campus had connections to specific guides, the library director also sent out a message to classroom faculty to let them know of our general plan to revamp the guides and that many would be removed over the summer. Surprisingly, there were few objections either amongst the librarians or the classroom faculty once they understood the rationale and process. Of the few classroom faculty members that did respond to the library director's message, most of them were more concerned with content or specific links that they felt strongly about versus the guides themselves. In those cases, we noted the content requests to make sure they appeared on the new guides. Most of these instructors were satisfied when we further explained our process and, if needed, ensured them that the content they requested would be worked into the new guide. Only one instructor who responded, whose assignment was related to a grant they had received, made a strong case for keeping a separate guide for their sections of English 101.

With the project approval out of the way, it was then time to begin removing all of the to-be-deleted guides and start the process of revamping those that would be kept. The goal was that the project would be completed by the start of the fall semester so that faculty and students would come back to a new (and hopefully, much improved) set of guides.

Removing Debris
To be cautious, a few preliminary steps were taken before the guides selected for deletion were removed. For starters, the selected guides had their status changed to "unpublished," meaning that they no longer appeared on the public-facing list of guides. This gave everyone a chance to say something if a guide they were actively using suddenly went "missing." These unpublished guides were then downloaded using the LibGuides HTML Backup feature and saved to the department's

network share drive. While the HTML Backup output is not a full representation of the guide (the file generated displays as a single page and is missing any formatting or images that were included in the guide), it does include all of a guide's content, meaning that a link or block of text can be retrieved from the backup in case of moments of "I know I had this on my guide before but...."

Because of the somewhat haphazard nature of our guides, deleting unwanted ones turned out to result in interesting and unexpected challenges. Over the years, some of librarians had, from time to time, reused individual boxes between guides, but there was no consistency to the practice. While there was a repository guide for reusable content, not everyone used it or used it consistently. Thankfully, LibGuides runs a pre-delete check, which proved to be invaluable in this process, as it showed if any of the boxes displayed on one guide were reused on any others. In most cases where boxes were reused, they were reused on guides that were also on the "to be deleted" list, but that was not always the case. By having that check we could find the other guides listed and make copies of the boxes that would have otherwise been deleted. If a box was reused on multiple guides that were being kept, it was copied to the Reusable Content guide and then remapped from there.

Cosmetic Improvements
In conjunction with the work being done to improve content of our guides, the web and systems librarian felt it was the perfect opportunity to update the guide templates and overall aesthetics to make the guides more visually appealing, especially considering little had been done in this area system-wide apart from setting the default color scheme. Using the project guide as an initial sandbox, several changes were put into motion that would eventually be worked into new templates and pushed out to all of the reworked guides.

The first, and perhaps biggest, change was the move from tab navigation to side navigation (an option first made available with the release of LibGuides v2). While there have been several usability studies that have debated using one over the other, in this case side navigation was chosen both for the streamlined nature of the layout as a whole (by default there is only one full content column), and because enabling the box-level navigation could serve as a quick index for anyone looking to find specific content on a page.[7] Side navigation also avoided the issue of long lists of tabs spilling into a second row, which further complicated page navigation.

Several changes to the look and feel of the guides were also put into place, with many of the changes coming from suggestions given on various LibGuide style or best practice guides or more general recommendations from web usability guidelines.[8] Perhaps most importantly, all of the font sizes were increased for improved readability, especially on box titles and headers, to better facilitate visual scanning. The default fonts were also replaced with two commonly used fonts from the Google Fonts library, Roboto (for headings and titles) and Open Sans (for body text). Additionally, the navigation color scheme was changed because the orange of the college's blue-and-orange color scheme regularly failed accessibility contrast checks and was described by some colleagues as "harsh on the eyes." Instead, two analogous lighter shades of blue (one of which was taken from the college's branding documentation) were selected for the navigation and box titles respectively, both of which allowed for the text in those areas to be changed from white to black (again, for improved readability). Figure 1 shows a typical "before" guide navigation design, and figure 2 shows a typical "after" design.
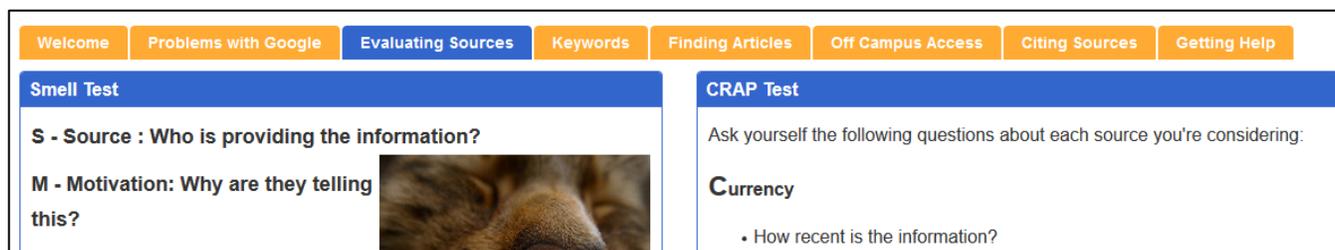
Figure 1. A sample of guide navigation and content frequently found on guides before start of cleanup
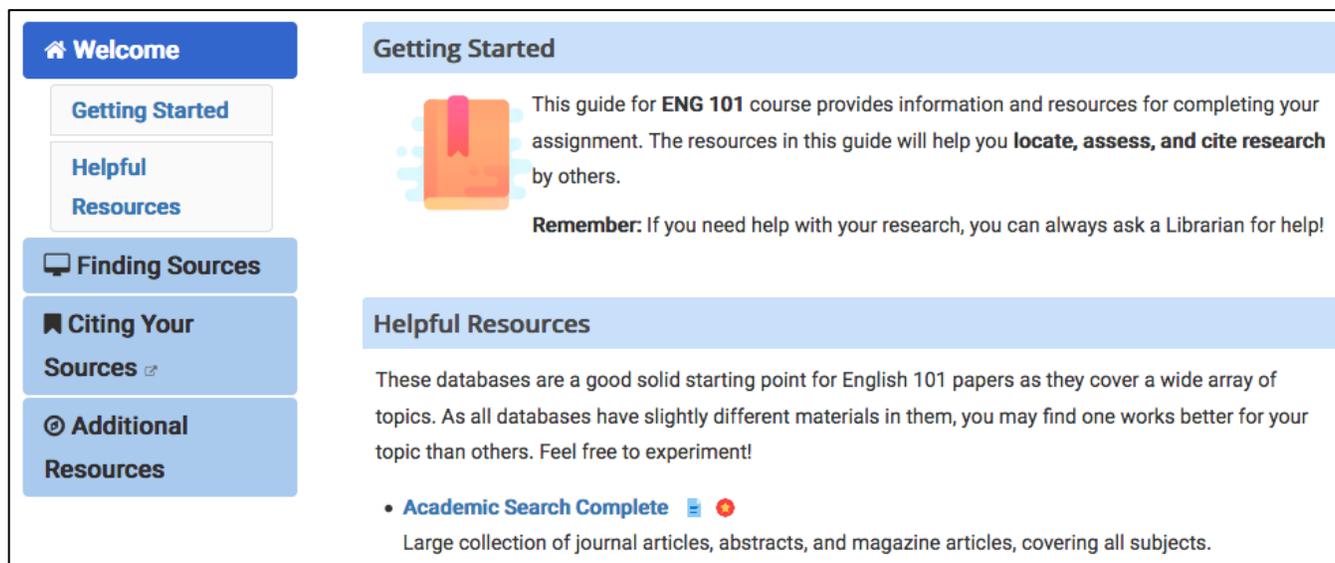

Figure 2. Navigation and content after revisions

Additionally, the web and systems librarian took this opportunity to go through the remaining guides to ensure they were all consistent. Most of this work fell in the area of text styling, or rather, undoing text styling. It was clear from several of the guides that over the years, librarians had not been happy with the default font sizes or styles, which lead to a lot of customizing using the built-in WYSIWYG text editor. Not only did this create a nightmare in the code itself (as the WYSIWYG editor adds a lot of extraneous <span> tags and style markup), but it also meant that the changes coming from the new stylesheet were not being applied universally as any properties assigned on a page overrode the global CSS. There was also the issue of paragraph text (<p>) that was sometimes styled as fake headings (made larger or bolder to look like headings, but not using the proper <h#> tags) which needed to be corrected for consistency and accessibility purposes.

Replanting and Sprucing Up
With an overwhelming majority of the guides (and their associated assets) deleted, it was finally time to rework the remaining guides into clear, easy-to-use resources that would benefit our students. At this point the guides fell into three categories:

- Guides that just needed to be pruned and updated.
- Guides that should be combined into a single subject area guide.
- Guides that should be created to fill an unmet need.

Pruning and updating tasks were generally the least-arduous, as many of the guides included content that was also housed on discrete guides (citations, resource evaluation, etc.). Instead of duplicating, for example, citation formats on every guide, those pages were replaced with navigation-level links out to the existing citation guide. This was also the point that we could do more extensive quality control such as switching to a single content column which further emphasized the extraneous information on many of our guides. Infographics, videos, and long blocks of links or text were scrutinized to determine if they were helping to enhance students' understanding of the core content or if they were merely providing clutter that would make it more difficult to understand the important information.[9]

In some cases, by going from guide to guide, it became apparent that there were guides for multiple courses in a subject area where the resources were basically identical. This was most noticeable in the criminal justice and health education subject areas. In these cases, it made little sense to keep separate course guides when the content was basically the same across them. To remedy this duplication, one of the course guides for each subject was transformed into the subject area guide, and resources were added to ensure they covered the same materials that the separate course guides may have covered. The remaining course guides were then marked for future deletion as they were no longer needed.

Lastly, subject areas without guides were identified so that work could be done later to create them. As we had discussed moving towards using the "automagic" integration of guide content into our Blackboard Learning Management System (LMS), this step will be key in ensuring that all subject areas have at least some resources students can use. However, as of this time we have yet to finish creating these additional guides, and several subject areas (including computer science, nursing, and gender studies) have no guides at all.

NEXT STEPS

Now that all of the work to clean and update our LibGuides is done, the most important next step is coming up with a workflow to ensure that the guides stay relevant and useful. The web and systems librarian mostly left the guides alone for the Fall 2019 semester to allow their colleagues time to use them and report back any issues. To the web and systems librarian's surprise there were few issues reported, but that does not mean there is no room for future improvement. As a department, it is clear that we need a formal plan for maintaining the guides, including update frequency, content review, and guidelines for when guides should be added or deleted.

Additionally, immediately following the conclusion of this cleanup project the library's website was forced into a server migration and full rebuild for reasons outside of the scope of this article. However, as a result there were changes made on the library's site involving the look and feel of pages that will need to be carried through into our guides and associated Springshare platforms. While most of this work is relatively simple, mimicking changes developed in WordPress to work properly on external services will take time and effort.

CONCLUSION

Overall, while this project was a massive undertaking (done almost entirely by a single person), the end result, at least on the surface, has made our guides much easier to use and understand. There were obviously several things that, if the project were to be done over, should have been done differently, mostly involving the cleaning of the asset library. However, it is now much easier

to refer students to guides for their courses and the feelings about the guides amongst the Library faculty have become much more positive.

ENDNOTES

[1] "LibGuides: The Next Generation!," *Springshare Blog* (blog), June 26, 2013, https://blog.springshare.com/2013/06/26/libguides-the-next-generation/.

[2] The guide can be viewed at: https://bmcc.libguides.com/guidecleanup.

[3] Though the author only learned of the project undertaken at UNC a few years ago, after they had already finished this project, a similar project was outlined here: Sarah Joy Arnold, "Out with the Old, in with the New: Migrating to LibGuides A-Z Database List," *Journal of Electronic Resources Librarianship* 29, no. 2 (April 2017): 117–20, https://doi.org/10.1080/1941126X.2017.1304769.

[4] Because there was no way to view the documents before a bulk deletion, documents were manually reviewed and deleted as needed.

[5] It was only long after this process that Springshare promoted that they could do this on the backend by request.

[6] However, it turned out that due to the differences in URL structure between classic Primo and Primo VE that this change was completely unnecessary as the URLs did actually needed to be changed again post-migration. At least they were consistent which meant a systemwide find-and-replace could take care of most of the links.

[7] Several studies have been done since the roll out of LibGuides v2 including: Sarah Thorngate and Allison Hoden, "Exploratory Usability Testing of User Interface Options in LibGuides 2," *College and Research Libraries* 78, no. 6 (2017): 844–61, https://doi.org/10.5860/crl.78.6.844; Kate Conerton and Cheryl Goldenstein, "Making LibGuides Work: Student Interviews and Usability Tests," *Internet Reference Services Quarterly* 22, no. 1 (January 2017): 43–54, https://doi.org/10.1080/10875301.2017.1290002.

[8] Of the many guides the author consulted, the following were the most informative: Stephanie Jacobs, "Best Practices for LibGuides at USF," https://guides.lib.usf.edu/c.php?g=388525&p=2635904; Jesse Martinez, "LibGuides Standards and Best Practices," https://libguides.bc.edu/guidestandards/getting-started; Carrie Williams, "Best Practices for Building Guides & Accessibility Tips," https://training.springshare.com/libguides/best-practices-accessibility/video.

[9] There is a very detailed discussion of cognitive overload in LibGuides in Jennifer J. Little, "Cognitive Load Theory and Library Research Guides," *Internet Reference Services Quarterly* 15, no. 1 (March 1, 2010): 53–63, https://doi.org/10.1080/10875300903530199.