



## **A Promising Partnership: An Undergraduate Intern and Librarian Collaborate on Research Guides and Collection Development**

**Lee Ann Fullington**  
Health Sciences Librarian  
Brooklyn College  
The City University of New York  
Brooklyn, New York  
[LAFullington@brooklyn.cuny.edu](mailto:LAFullington@brooklyn.cuny.edu)

**Alexandra Torres**  
MSLIS Candidate  
Queens College  
The City University of New York  
Queens, New York  
[Alexandra.Torres@brooklyn.cuny.edu](mailto:Alexandra.Torres@brooklyn.cuny.edu)

### **Abstract**

Though library science internships for undergraduates are not as well documented as those for MLIS students, internships for undergraduates can be impactful for both the intern and the library. Undergraduate students have firsthand, immersive experience with their major curriculum, and this expertise can benefit science librarians making collection development decisions and creating content for research guides. This article discusses two such projects undertaken by an undergraduate mathematics major as part of a science librarianship internship.

### **Introduction**

Science librarians at liberal arts colleges often lack opportunities to connect with undergraduate STEM majors. Teaching faculty in the sciences rarely request instruction, or perpetually turn down librarians' offers to provide instruction ([Bussmann & Bond 2015](#)). Some encounters happen at the reference desk or campus events, but by and large, STEM students may not know that science librarians exist, let alone seek science librarianship as a possible career path. Perhaps not surprisingly then, recruiting science librarians has long been a problem ([Brown 1988](#); [Kreitz & DeVries 2006](#)). Not to be daunted, in 2008, the chief librarian at Brooklyn College wanted to address the recruitment problem and tasked our reference department with devising a program. Over a few semesters of research, consideration, and reflection, the reference and instruction

librarians developed a curriculum for an undergraduate science information internship, piloted in Fall 2014. The internship serves two main purposes--involve an intern with projects that would benefit the college community while providing the intern with a window into science librarianship as a career option. This article discusses one particular semester of our nascent program, focusing on the projects the intern worked on, along with context for how we recruited this particular intern.

Our science information internship program pairs one intern with a supervising librarian who provides foundational knowledge about science librarianship through assigned readings and discussion ([Harrick & Fullington 2017](#)). The intern also visits all other service units (technical services, special collections, administration, and so forth) in the library to gain a sense of how an academic library functions, overall. Throughout the semester, the intern shadows various librarians at the reference desk to gain an understanding of how librarians assist students. The intern also learns about information literacy approaches and the pedagogical underpinnings of our instruction sessions. The intern also participates hands-on in selected projects with the supervising librarian.

Denda & Hunter ([2016](#)) found that an internship program should "consider seriously the notion that everyone has specific knowledge, ranging from expertise, ethnic and national backgrounds, professions and interests, life experiences, and aspirations and the notion of learning from everyone." In selecting projects for the intern, we bore their assertion in mind. Rather than using a traditional hierarchical model, we identified projects that were collaborative rather than simply task-driven. Creating research guides and selecting materials for the circulating and reference collections are excellent opportunities for collaboration, since an undergraduate has the experiential knowledge of a degree program that comes from being immersed in the major. Thus, for a liaison librarian, this type of partnership presents a rare opportunity to tap directly into the student experience in order to create relevant, targeted resources.

At our primarily undergraduate, master's granting public liberal arts college, each librarian liaises with a number of departments (we are a staff of 10 reference and instruction librarians, serving over 30 departments). As the Health Sciences Librarian--and currently the only science librarian on staff--I am the subject specialist for health and nutrition, kinesiology, earth and environmental sciences, mathematics, and physics. My subject background is public health, and, like many science librarians at colleges such as ours, I do what I can to best serve the disciplines with which I am not as comfortable or familiar. I am continually learning the needs of these departments and how to best support the students and curriculum. As the sole science librarian, I am also currently the supervising librarian for the science information internship.

## **Recruiting the Intern**

As our intern Alexandra explains below, she did not have a clear sense of her career path as she neared graduation:

As a mathematics student, I struggled to find a career that would bring me the most fulfillment and joy, as well as utilizing my skills. My final year as an undergraduate was approaching, and I didn't know what I wanted to do after

college. I tutored middle and high school mathematics students and considered teaching because that was the field I was most familiar with. Yet, I questioned if teaching was where I belonged.

In my junior year, I took the History of Mathematics course that required a research paper. My experiences in research were from when I was a freshman, and extensive research on the history of mathematics was new to me. I was only familiar with searching Google. I did not expect this class to involve so much research, and I spent most of my time in the library unsure of what I needed for my paper. I needed the right resources and online tools for my paper, and I spoke to a librarian for help. I happened to meet Lee Ann, the mathematics librarian, by chance, at the reference desk, and she helped me with databases for research. I spent some time familiarizing myself with the mathematics databases and the sections of mathematics history books located in the library. After successfully completing my paper, I became curious about what else the library had to offer. I spoke with Lee Ann again, and she offered to mentor me through the science information internship program for the Summer 2016 semester.

In our conversation, I explained to Alexandra that, though I was not trained in mathematics, I was assigned the subject area when I was hired, and I am essentially an "accidental" mathematics librarian. I explained that my story is not uncommon, as this is how smaller academic libraries tend to work, and librarians do the best they can to support subjects that may not be their forte.

Because of her pedagogical interests and desire to contribute to helping other mathematics students with research assignments, we decided that a fitting project would be to migrate the current online research guide content for mathematics to the LibGuides platform and create or curate specific content for the History of Mathematics course within the new guide. I also wanted to introduce her to collection development and have her assist with selecting materials for our mathematics monographs and study guides collections. These two projects would benefit from Alexandra's insights and feedback as a student currently enrolled in the major, while giving her hands on experience with meaningful library work.

Alexandra came in one set day per week for a seven-hour shift over the course of the summer semester. Each week she documented her experiences with a reflective journal entry to share with me, so we could continue our dialogue from one week to the next and discuss her questions, concerns, and ideas. I also kept a journal recording my own thoughts and reflections to document what I learned from Alexandra.

## **Collection Development**

A core responsibility for liaison librarians is collection development. Alexandra commented in her reflective journal that she was excited about working on the mathematics selections, as we would be purchasing

Books that will be useful for students to engage with various mathematics topics and what may be relevant to the mathematics curriculum. The task is what I'm

most interested in so far because, as a mathematics student here, I want to provide supplementary materials besides the required textbooks. I'm excited to give my input and use my experiences to provide this extra help for students.

Alexandra completed a few readings on doing subject specific collection development, and we discussed how I make my own decisions using CHOICE cards, *Books in Print*, book reviews from various library publications, Amazon reviews, word of mouth, and my own gut instinct based on the brief descriptions in the course bulletin. I often struggle with making good decisions for collection development. To the best of my ability, I aim to support the curriculum and keep a student-centered focus. Thus, collaborating with an intern majoring in mathematics was appealing in terms of tapping into her subject expertise and familiarity with the curriculum. As a senior, Alexandra was in an excellent position to advise and collaborate on selecting materials.

To become more familiar with searching the catalog and gain an understanding of math-related subject headings, Alexandra searched our library and consortia catalogs to see which titles we already owned and which mathematics topic areas we could augment with new titles. Throughout the selection process, we looked at descriptions via online bookseller web sites to identify additional titles in the *Schaum's Outlines* series, as well as other series of study guides we did not currently own, and monographs and handbooks to add to our reference and circulating collections. We also collaborated on selecting graphic novels on STEM topics to enliven our collection.

In addition to making her own selections and justifications, Alexandra gave me feedback as to how an undergraduate would respond to the materials on the titles I had listed to consider, and made cases for inclusion or exclusion in the final selections. She also demystified numerous topics for me and showed me how the unfamiliar topics related to the curriculum. I trusted her insightful feedback and choices, as she was coming from the user perspective and was immersed in the major. I will use my new knowledge and reflective notes for future selections.

Because we need to do a lot with very little in this age of budget cuts, having input on purchases from a student with insider knowledge of the curriculum, such as Alexandra, is invaluable. She was thorough in noting which books would be related to specific courses and indicating why it would be beneficial to add to our collection based on her experiences in the classes. Alexandra's insights made me less anxious about the selections I was making and affirmed the value of a partnership approach to internships. It was also confirmation that when a librarian has limited knowledge of a subject area, an intern with subject expertise can be instrumental in making thoughtful and useful collection development decisions.

## **Research Guides**

After using a homegrown version of online research guides for a number of years, our library had recently transitioned to the Springshare LibGuides platform. This adoption was a great opportunity to reevaluate and update content from our original research guides, and it seemed sensible to devote a portion of the internship to learning how to create and populate instructional guides. Alexandra was especially interested in creating content that would be useful for fellow

undergraduate classmates, and she was excited by the chance to learn the platform, as it would be a skill she would use in library school.

While deciding on the content for her internship together, Alexandra talked about her frustration in completing the research paper for her History of Mathematics class a few semesters prior. We recalled that we had looked at the mathematics research guide together during our original reference interaction, and I was dismayed to realize that the guide was not useful to her for the course. This realization prompted us to redo the guide and improve its utility for the course. For all the effort librarians put into these guides, when they turn out to be an exercise in futility, languishing unused by students, it is disheartening. Thus, the new guide needed to be more relevant and appealing for students, and as the liaison I would need to do a better job of promoting it to faculty.

All mathematics undergraduates are required to take the History Of Mathematics course, which is the only course in the major that requires a research paper. In their freshman year, students take the required composition course, which includes a library instruction session, but at this point in their undergraduate careers they might not remember how to access the databases or know that the library has subject specific databases, or they may have transferred in and not have had a course that included library instruction. With this gap in mind, we resolved to insert content specifically geared to the History of Mathematics class into the new guide and we added tips for conducting research for the assignment. This new, improved guide could serve three purposes: a do-it-yourself resource for students, a teaching tool for instruction sessions (should the mathematics faculty member agree to a session when I renew my outreach efforts), and a resource to use with students at the reference desk or for inclusion on math syllabi.

The library originally had two separate mathematics research guides--one for "study help" for students who want to brush up on college-level math skills, and another guide specific to the mathematics curriculum, containing information about advanced mathematics topics and a list of recommended databases, but no study help. Alexandra recommended that we break the study guide content from the original guide into two different pages, one for more "teach yourself" type resources, and one for advanced topics. In her reflective journal, she wrote that "as a math student at Brooklyn College, I noticed that the study guides were not enough to satisfy the students' academic needs; the math study guides were helpful to review topics from high school math like geometry, algebra, etc., but they did not cover college level mathematics courses." As we talked through the original mathematics research guides together, Alexandra pointed out content areas that needed improvement. She gave feedback on the linked web sites and resources and made recommendations for new resources that were more user friendly, complete, and robust. Having used these same resources in her own studies, she was able to write meaningful short descriptions for the guide.

As Alexandra describes, her contributions to the guide were extensive:

The library had an old version of the mathematics research guide, and I was able to use it to update the mathematics LibGuides version and share some ideas on what the new guide needed. This consisted of online tools and calculators, online study help for various mathematics subjects, and a list of engaging STEM graphic

novels recommended as a fun way to learn about mathematics and science. I also made sure that the online resources were reliable and credible, found relevant books for a variety of mathematics courses, and helped finalize the guide.

Without a doubt, Alexandra brought much to the process of selecting resources for this research guide. As an undergraduate who authentically engaged with resources through her coursework, her judgments about the usefulness of resources were uniquely well informed. An undergraduate contribution like this can be a boon to any liaison librarian forced to rely on an educated guess about the applicability of a resource. An analysis of usage statistics from comparable semesters showed a 204% increase in page views for the new mathematics research guide over the combined views of the old guides. Furthermore, we have anecdotal evidence from the reference desk of students asking for mathematics resources who are appreciative and enthusiastic when shown the new LibGuide. A few students have come back to thank the library for putting the guide together, so we are pleased to see that our work has been useful to students.

## **Conclusion**

Even though I was the science librarianship intern, I was included as a partner on these projects. Lee Ann and the librarians believed my ideas and experience as a Brooklyn College student were useful, and sharing my ideas for the new mathematics research guide made me feel knowledgeable and perceptive. Being a part of the project has inspired me to help students and share helpful materials and resources with the campus community. Our work was much more a partnership than simply an internship.

In addition, this internship has given me the opportunity to find my interests and explore career options. I utilized my time as a student to share my knowledge with others through the mathematics research guide and further seek what the campus community needs. Using my time as an intern and the vast amount of information I obtained, I realized that this experience had been a critical component in my journey as a future science librarian. I developed a sense of belonging to the field and fulfillment from the library community.

For an intern with a potential interest in pursuing science librarianship as a career, having hands-on experience with processes and a theoretical and practical grounding in the underpinnings of the field provides a strong foundation for entry to an MLIS program. Alexandra is a highly motivated student who became curious about librarianship as a career option. We were fortunate that she initiated contact with me and wanted to participate in the internship. Along with promoting our internship at career fairs and student events, we will continue to be on the lookout for potential interest among the students we interact with during reference consultations or instruction sessions and serendipitously reach out to potential candidates for science librarianship.

After Alexandra's internship concluded, we offered her a position as a library assistant and she is now part of the reference department support staff. She continues to assist with STEM-related collection development and with various research guides. Our relationship has become even

stronger through our ongoing collaborative projects, the process of writing this article, her application to graduate programs, and her initiation into her chosen MLIS program. As Alexandra states, "Interning has given me an insight on what it would be like not just as a librarian, but a science librarian. Lee Ann has guided me through her day-to-day work and I was immediately inspired. I believe librarianship is where I need to be." For this particular iteration of the internship, we fulfilled our aims of encouraging a future science librarian to enter the field, as well as obtaining and creating useful resources for math.

## References

**Brown, L.** 1988. Recruiting science librarians. In: *Librarians for the new millennium*. Moen, W.E. and Heim, K.M., editors. Chicago: American Library Association. p. 65-71.

**Bussmann, J.D. and Bond, J.D.** 2015. Information literacy in mathematics undergraduate education: where does it stand today? *Issues in Science and Technology Librarianship* 81. DOI: [10.5062/F4WM1BD8](https://doi.org/10.5062/F4WM1BD8)

**Denda, K. and Hunter, J.** 2016. Building 21st century skills and creating communities: a team-based engagement framework for student employment in academic libraries. *Journal of Library Administration* 56(3):251-65. DOI: [10.1080/01930826.2015.1121662](https://doi.org/10.1080/01930826.2015.1121662)

**Harrick, M. and Fullington, L.** 2017. Sprouting STEMs: recruiting future science librarians through an undergraduate science information internship. *College & Undergraduate Libraries* 24(1): 65-79. DOI: [10.1080/10691316.2015.1118653](https://doi.org/10.1080/10691316.2015.1118653)

**Kreitz, P.A. and DeVries, J.** 2006. Introduction. *Science & Technology Libraries* 27(1-2):1-4. DOI: [10.1300/J122v27n01\\_01](https://doi.org/10.1300/J122v27n01_01)



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